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ABSTRACT

A study collected and analyzed information for use in improving the responsiveness of state agencies in carrying out their responsibilities in vocational education. Its basis was the position that the institutional leadership capacity of divisions of vocational education substantially affects the dynamics of vocational education. The first of two major tasks--a series of sixty-four discussion sessions--involved 222 state and local education officials in nine states to obtain perceptions as to the organizational, economic, and political considerations related to improving the responsiveness of state vocational divisions. The second task--development of a demographic and professional profile of vocational state staff--was conducted by mailed survey questionnaire. Forty-eight states volunteered to participate; 1,819 state staff responded. Results indicated staff hired within the last four years tend to be younger and composed of a higher percentage of women, and a large percentage are new to their state agency and/or position. (Appendixes, amounting to over one-half of the report, include data for Task 2, survey instrument, and additional information concerning turnover patterns among state directors of vocational education.) (YLB)

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A STUDY OF STATE LEVEL ADMINISTRATION OF VOCATIONAL EDUCATION

Richard D. Ruff

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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- Conducting leadership development and training programs

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FOREWORD

As vocational education has expanded during the last decade, the importance of state divisions of vocational education has continued to grow. Responsive state agencies have increasingly become a key component in the development of vocational education. Consequently, in developing the information base necessary for improving vocational education in the 1980s, an important area of inquiry will be the responsiveness of state agencies for carrying out their responsibilities for vocational education.

In order to initiate the development of that information base, the National Center for Research in Vocational Education, under contract to the U.S. Department of Education, Office of Vocational and Adult Education, has conducted a study of state level administration of vocational education.

Two major tasks were conducted during the study. First, discussion sessions were held in nine states with state and local education officials. Second, a national survey was conducted to obtain a demographic and professional profile of vocational education state staffs.

Excellent guidance in the initial design stage of the project was provided by David Jesser, a special consultant to the National Center. For the special assistance provided during the development of the survey instrument, a special appreciation is extended to Jim Galloway, Illinois state director; Clarence Burdette, West Virginia state director; Gene Lehrmann, past state director in Wisconsin; Garth Yeager, CEIS monitor and Frank Corrigan, executive director of FEDAC.

Special appreciation is extended to the state directors of vocational education, vocational education state agency staff and members of the vocational community who participated in the study. These people provided the substance of this report.

National Center staff members in the Evaluation and Policy Division who made significant contributions to the project were Richard Ruff, project director; assisted by Morgan Lewis, program director of the Planning and Policy Unit and N.L. McCaslin, associate director of the Evaluation and Policy Division. Special assistance was provided in the data collection and reduction by Lee Rasmussen and Janie Connell. Additional valuable support was provided by Kathie Medley and Rusty Grohoske, typists; Janet Kiplinger, editor; and Art Lee, reviewer.

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Robert E. Taylor
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Education

EXECUTIVE SUMMARY

The purpose of this study was to develop an information base which can be used to improve the responsiveness of state divisions of vocational education. The importance of the study is based on the position that state divisions of vocational education can substantially affect the pattern of change of vocational education.

Two major tasks were conducted during the study. First, a series of discussion sessions were held with state and local education officials to obtain their perceptions related to improving the responsiveness of state vocational divisions. Second, a national survey was conducted to obtain a demographic and professional profile of vocational education state staff.

The discussion sessions were held in nine states. A total of sixty-four sessions were conducted involving 222 discussants. The discussants included: state directors of vocational education, executive directors of state vocational advisory councils, state superintendents of public instruction, state agency vocational staff, local secondary and postsecondary vocational administrators and CETA representatives. The results of the discussion sessions provide a rich information base for improving the responsiveness of state divisions of vocational education. A summary of the results follows:

1. Because of local budget spending limitations, increases in teacher salaries, rising equipment cost, and the public's mood of fiscal conservatism, there was widespread concern among state and local education officials as to their economic capability to maintain high quality programs in vocational education.

2. The most common need among state and local vocational educators related to directing additional resources and attention towards equipment and teacher retraining. At both the secondary and postsecondary level, the maintenance of existing equipment and the acquisition of new equipment in response to changing technology were viewed as the greatest operational problems facing vocational education. A concomitant problem existed in relation to teacher retraining.

3. If more flexibility were extended to the states in reference to allocating federal funds, the states could be more responsive to both the federal initiatives and to local district needs. This

expressed need was based on such considerations as: (1) the diversity of the vocational education programming needed across and within states, (2) the rapidity of changes in the needs of business and industry, (3) the need to develop a quick response capability to provide greater assistance in achieving state economic development goals and (4) the need to develop new cooperative arrangements with business and industry.

4. Although there were perceived improvements in the overall planning process, limited support existed for the state plan among state and local vocational educators. This lack of support originated from the perceptions that the state plan is a federal compliance document, rather than a blueprint of state policy or action.

5. Most state and local education officials felt that vocational education has improved its capability to address the needs of special population groups. Although a majority felt the federal government should maintain its emphasis in this area, concern was expressed about the federal excess cost requirements which were deemed counterproductive for developing programs for the disadvantaged and handicapped. In addition, a need was expressed to develop federal legislative approaches which emphasize programming for special needs populations and also provide flexibility to the state as to how that emphasis is implemented. The present use of set-asides was viewed as a less than optimum strategy for achieving this dual need.

6. Most state level vocational educators held the opinion that a reduction has occurred in the last three to four years in the percentage of staff resources committed to traditional technical assistance activities (for example, equipment planning, curriculum selection, personnel retraining, facility planning and youth organizations). They felt this reduction has negatively affected the quality of state leadership, and ultimately the reduction will lead to a decline of the quality of local programs. It was suggested that the major causal factors for the reduction were: (1) increased demands related to satisfying federal vocational legislation compliance requirements (for example, state plan development, accountability report preparation, and data collection activities relatd to VEDS); and (2) increased demands from other federal and state legislation such as the responsibilities associated with the Office of Civil Rights requirements.

7. There were two major positions expressed as to the desired future direction of secondary vocational education. The first position centered on the need to re-emphasize skill training. According to this position, the goal of vocational education is to train students for job placement; therefore resources allocated for other purposes simply dilute the effectiveness of the program. The other position was based on the opinion that a broader definition of vocational education must be adopted if the program is to be responsive in the 1980s. This broader definition would include, in addition to skill training, an increased emphasis in the areas of occupational exploration, employability skills, and the basic skills (3 R's). Both positions were strongly supported by their proponents.

8. Although isolated success stories were reported concerning vocational education and CETA linkage, the prevailing opinion was that linkage between vocational education and CETA is not presently effective on a pervasive scale. There are a number of operational problems such as: different fiscal years, different reporting requirements, and different evaluation procedures which are barriers against effective linkage. In some cases, additional differences existed which were based on the distinction between education versus training. It was generally agreed that legislative mandates with incentives will be necessary for a substantial increase in the collaboration between CETA and vocational education.

9. There was general agreement among postsecondary vocational educators that more emphasis needs to be placed on developing cooperative arrangements with business and industry. This additional effort would include not only developing new approaches for executing existing arrangements, but also developing new types of arrangements for achieving new goals. A caution was extended, however, that cooperative arrangements with business and industry are not a total answer for maintaining quality vocational programs.

10. Although the federal funds are greatly overmatched with state and local dollars, it was considered a major fallacy that federal support could be withdrawn without negative impact. Because of local educational financing considerations, there is not local money to replace withdrawn federal funds. The areas which would be most affected by the removal of federal dollars would be those areas which relate to upgrading existing programs and instituting new programs.

Because of the perceived changes which vocational education must institute in order to be responsive in the 1980s, the importance of new programs, and hence the importance of federal support was deemed particularly critical.

Based on the results, the following recommendations were developed:

1. State divisions of vocational education should place increased emphasis on re-examining the nature of their services since the economic, political, and organizational trends which will influence vocational education in the 1980s will create a need for greater diversity--greater diversity in terms of clients to be served, types of services to be delivered, and delivery methods to be employed. In light of the greater diversity, the leadership which provided the impetus to develop high quality programs in the 1970s may not be as responsive in the 1980s. Because the new programming needs will be diverse across and within states, the federal legislation and the accompanying rules and regulations should possess the increased flexibility needed by divisions of vocational education to plan and execute these new efforts.

2. In order to increase their responsiveness in the 1980s, state divisions of vocational education will need to increase their capability to provide both leadership in the traditional occupational areas and in new functional areas such as economic development, access equity and methods for increasing the productivity of American industry. A capability in only one of the two areas will not be adequate. In order to be responsive to this dual responsibility, divisions of vocational education will need to develop new types of collaborative arrangements and re-examine their organizational structures and staffing patterns.

3. Before new compliance requirements are proposed for divisions of vocational education, the federal government should place increased emphasis on assessing the benefits to be achieved versus the costs to be incurred. The importance of the assessment increases when additional funds are not appropriated to plan and execute the new requirements and when the requirements do not relate directly to improving local vocational programs. The assessment should take into account that a reduction has already occurred in the percentage of state level resources committed directly to improving the quality of local vocational programs.

4. State divisions of vocational education should continue to place an emphasis on improving the state and local planning process for vocational education, particularly in relation to involving a wide variety of participants in the planning process. In order to provide the basis for substantial improvement in the planning process, the federal government should re-examine the nature of the state plan. The re-examination should focus on establishing a basis for state divisions of vocational education to develop a state plan which is in greater agreement with the realities of how planning is actually accomplished at the local and state level. In the long term, a movement in this direction will enable state divisions of vocational education to be more responsive to both local and federal priorities.

5. State divisions of vocational education should develop new approaches for executing existing types of cooperative arrrangements with business and industry and explore the mutual benefit of developing new types of collaboration with business and industry. The federal government should facilitate the expansion of these cooperative arrangements by providing incentives in the federal legislation. In order to maximize the effectiveness of the incentives, the legislative strategies should be flexible and the rules and regulations should be minimized.

6. The federal government should continue to place an emphasis on service to special client populations. Alternative approaches, however, need to be developed which provide an emphasis for programs for special client populations and also provide the flexibility needed by divisions of vocational education to be responsive to the diversity of the conditions which exist in their respective states.

7. State divisions of vocational education should provide increased leadership and technical assistance to local educational agencies for developing the short, intensive, specialized programs which are required to be responsive to CETA clients. To provide divisions of vocational education the support required to execute more substantial and pervasive linkages between CETA and vocational education, new incentives should be included in the federal vocational education legislation and in the CETA legislation. In addition, the CETA and vocational education rules and regulations should be made more compatible in relation to operational considerations such as reporting requirements, funding issues and evaluation procedures.

The second task, which was the development of a demographic and professional profile of vocational state staff, was conducted via a mailed survey questionnaire. Forty-eight of the fifty states volunteered to participate in the survey. A total of 1,819 state staff responded to the questionnaire which constituted an 81 percent response rate for the participating states. In this report the major purpose was to delineate the survey results so that they could be used for subsequent study; hence; the results are presented in detailed tabular form in Appendix A.

A preliminary analysis of the data was conducted for this report; it revealed a number of interesting results including the finding that staff hired within the last four years tend to be younger and composed a higher percentage of women than the existing staff. In addition, the results indicated that a large percentage (33 percent) of staff are new to their state agency and that an even larger percentage (50 percent) are new to their position.

These results and others are described in detail in this report.

CHAPTER I

INTRODUCTION

The 1980s will be a challenging and important period for vocational education. The considerations which must be addressed in developing responsive national and state policy for vocational education will be varied and complex. In developing the information base necessary for vocational education policy formulation, an important inquiry area will be the responsiveness of state agencies for carrying out their responsibilities in vocational education. As vocational education has continued to expand during the last decade, the importance of state divisions of vocational education has continued to grow. Responsive state agencies have increasingly become a key component in the development of vocational education.

If an understanding of agency responsiveness is to be developed, it is important to recognize that state agencies address two major areas of responsibility. The first area relates to federal initiatives; the second relates to local program needs. These two sets of responsibilities are not necessarily identical; that is, in some cases the similarity between local program needs and the needs which drive the federal initiatives may be limited. In other cases, the needs may be similar but rearranged in reference to the relative order of priority.

In developing an understanding of state agency responsiveness, it is also important to recognize the differences in the nature of divisions of vocational education throughout the country. They differ widely in reference to the pivotal political, economic, and organizational dimensions that shape the nature of institutional entities. Examples of the differences on these dimensions are presented in the following three paragraphs.

In reference to the political dimension, some states have a separate governing board for vocational education. In other states, the governing board has responsibility not only for vocational education but also for all of elementary and secondary education. In a national study conducted by Gentry (1979), five different governance structures for vocational education were identified.

Turning to the economic dimension,in some states the amount of funding received from the federal vocational education appropriation is substantially less than the amount of available state funds. In other cases, the federal funding approximately equals or exceeds the state level appropriation for vocational education.

Viewed from an organizational perspective, the staffing patterns of divisions of vocational education differ across states. For example, some states have maintained a very substantial presence in reference to staffing in the classic occupational areas. In other states, the occupational units or bureaus have been partially dismantled and new emphasis has been placed on hiring personnel whose major expertise is in a functional area such as: planning, evaluation, federal liaison, or fiscal management.

The ideas of the duality of the responsibility of state divisions of vocational education, as well as, the notion that state divisions are characterized by diversity, are central to understanding the results of this study. Moreover, an understanding of these ideas is fundamental in order to effectively use the results in planning and developing policy.

Purpose of the Study

The purpose of this study was to collect and analyze information which could be used to improve the responsiveness of state agencies in carrying out their responsibilities in vocational education. The purpose is based on the position that the institutional leadership capacity of divisions of vocational education substantially affects the dynamics of vocational education.

In line with the purpose, two major tasks were conducted. First, discussion sessions were held in nine states to obtain the perceptions of state and local education officials as to the organizational, economic, and political considerations related to improving the responsiveness of the leadership provided by state divisions of vocational education (Task 1). Second, because of the importance of the relationship between staffing characteristics and institutional leadership capacity, a survey was conducted to obtain a demographic and professional profile of vocational education staff (Task 2).

Overview of the Report

This report contains separate chapters for each of the above mentioned tasks. Chapter II presents the methodology, results, and recommendations for Task 1. Chapter III presents the methodology for Task 2 along with selected result highlights. The data for Task 2, along with the survey instrument and additional information concerning the turnover pattern among state directors of vocational education, are presented in the appendices.

CHAPTER II

DISCUSSION SESSIONS

Method

Introduction

The purpose of this part of the study was to collect and analyze information which could be used to improve the responsiveness of the leadership provided by state divisions of vocational education. In order to obtain this information, discussion sessions were held in nine states with state and local education officials.

As is the case with all information gathering procedures, this approach has both limitations and strengths. Due to the significant amount of time and money required to conduct discussion sessions, one of the limitations is the relatively small number of people from whom information can be solicited. The data reduction procedures for this approach involve another limitation. The approach does not lend itself to the quantification of results; that is, the results are not easily reduced to summary statements such as - "seventy-five percent of the local directors expressed the following opinion. . . ." This limitation is particularly true when group discussion sessions are employed.

The major reason for electing to employ the discussion session method was based on its applicability for soliciting information relative to broad, complex areas of inquiry. A second reason related to the nature of the desired information; it was important to identify not only what the opinions of state leaders were, but also why they held those opinions.

Selection of States

Nine states were selected by the National Center staff to participate in the study. The selection was based upon three parameters. First, the geographic region of the country was considered. One state was selected from each of the standard federal regions (regions I and II were combined). The second parameter was state governance structure. Two facets of governance structure were addressed: (1) policy board structure (states with separate boards for vocational education vs. states with boards with dual responsibility) and (2) selection method for the superintendent of public instruction (elected vs. appointed). The third consideration was the size of the population of the state. The selected states and their associated selection characteristics are given in Table 2.1.

In order to secure participation, letters of invitation from

TABLE 2.1

STATE SELECTION

STATE	FEDERAL REGION	BOARD STRUCTURE	SELECTION OF SUPERINTENDENT	POPULATION SIZE*
Arkansas	VI	Combined	Appointed	2,186,000
California	IX	Combined	Elected	22,294,000
Colorado	VIII	Single	Appointed	2,670,000
Georgia	IV	Combined	Elected	5,084,000
Iowa	VII	Combined	Appointed	2,896,000
Massachusetts	I & II	Combined	Appointed	5,774,000
Virginia	III	Combined	Appointed	5,148,000
Washington	X	Single	Elected	3,774,000
Wisconsin	V	Single	Elected	4,679,000

* U.S. Department of Commerce, Bureau of the Census. Statistical Abstracts of the United States. 100th ed. Washington, D.C.: U.S. Government Printing Office, 1972.

the executive director of the National Center were sent to the director of vocational education in each state. All nine states elected to participate in the study.

Identification of Discussants

It was determined that the discussion sessions would involve four major groups of people. The first group was composed of state level administrators. This group included the state director of vocational education, executive director of the state vocational education advisory council, superintendent of public instruction, and postsecondary and other state level administrators. Because of the unique and pivotal perspective of the state director of vocational education, a decision rule was established that no visits would be scheduled unless the state director was available.

The second group was composed of members of the state staff for vocational education. In each state an attempt was made to include staff representing the traditional occupational areas, as well as, staff representing other functions such as sex equity, planning, evaluation, and fiscal.

Local administrators comprised the third and fourth groups. The third group was composed of local secondary vocational administrators. This group included local vocational directors, local vocational supervisors, and area vocational school administrators. Group four included postsecondary administrators (The group included occupational deans and instructional deans who had responsibility for both academic and vocational education.) and Comprehensive Employment Training Act (CETA) representatives. Table 2.2 presents the number of participants in each group.

Scheduling

In order to facilitate scheduling, a contact person was named for each state. The exact dates for the visits and the specific schedules were determined in conjunction with the contact person who was also responsible for selecting the specific discussants. All visits were conducted during the months of July, August, September, and October.

Two types of sessions were conducted. Individual sessions were held with the representatives of state level administration. Approximately sixty to ninety minutes were alloted for these sessions. For each of the other three groups of discussants, two-hour group sessions were held. All sixty-four sessions, with the exception of five, were audio recorded.

The project director conducted the discussion sessions in eight of the nine states. In one state, a second member of the project

TABLE 2.2

DISCUSSANT GROUPS

GROUP	NUMBER OF DISCUSSANTS
State Level Administrators	
State Director of Vocational Education	9
Executive Director of the State Vocational Education Advisory Council	9
State Superintendent of Public Instruction	3
Postsecondary and Other State Level Administrators	9
State Agency Vocational Education Staff	85
Local Secondary Vocational Administrators	46
Local Postsecondary and CETA Administrators	61
TOTAL	222

staff accompanied the project director during the discussion sessions, and in one state the discussion sessions were conducted by a senior member of the National Center's senior staff.

Discussion Sessions

An unstructured approach to conducting the discussion sessions was employed. Given the purpose of the study and the desire to obtain a broad perspective, an unstructured, as opposed to, a structured approach was deemed more beneficial.

Because of its importance in each state and because of its familarity to all states and groups, the federal legislation was selected as the most appropriate framework organizer for the discussion sessions. Given this framework, a series of general discussion probes were developed to help solicit opinions during the sessions. The same discussion probes were employed for all four groups.

Data Reduction

The tape recordings of each discussion session were replayed in order to developed a written summary for each session. The summaries contained a synthesis of the responses organized by the general discussion probes.

For the first three states visited, the tape recordings of each session were summarized by the project director during the afternoon of the day the discussion sessions were held. This procedure was followed in order to determine minor modifications which could be instituted to improve the discussion session procedure.

The remaining discussion sessions were summarized using the same data reduction procedure. The recordings from five of the six remaining states were summarized by the project director and two other members of the project staff. The sessions from the ninth state were summarized by the senior staff member who conducted the visit to that state.

Results

Introduction

The results were divided into four sections . The four sections correspond to the four groups with whom discussion sessions were held--state level administrators, state vocational education staff, local secondary vocational administrators, and local postsecondary and CETA administrators. The same format was used for organizing the results in each of the four sections. First, the considerations most commonly addressed by each group were presented. For each consideration, a delineation of the majority opinion was

presented, along with a number of comments derived from the group discussions. The purpose of including the comments was twofold: (1) to provide additional information concerning the majority opinion and (2) to provide information concerning additional points of interest. Each comment is labeled either majority opinion or additional point of interest. This procedure was followed for clarity since the comments labeled majority opinion are a synthesis of the comments of several discussants and represent the viewpoint of a majority of the discussants. The comments labeled additional points of interest were selected because they provide additional perspectives to the consideration under discussion. They are, however, points of view which were not frequently noted by the discussants.

The second part of each of the four sections was labeled Additional Considerations. The purpose of this section was to bring forth those considerations which were deemed particularly important to a select number of discussants but were not commonly addressed. A short paragraph is presented for each such consideration. Each paragraph is a synthesis of the opinions of several discussants.

In order to use the results in the two parts of each section most effectively, the difference between the notions of most common and most important should be distinguished. The considerations termed most common were those which were most frequently addressed across states. In part, they were the considerations of most interest to the discussants and in part they were an artifact of the discussion probes used to guide the sessions. Given a particular state or a particular area of investigation by the reader, the information presented in the Additional Considerations sections may be equally important. The results for each of the four groups are presented in the following pages.

State Level Administrator

State Planning. One of the most frequently noted issues among administrators was state planning. There was widespread opinion that the vocational education state plan is a compliance document used to secure federal funds, as opposed to, a planning tool. It is important to distinguish, however, between the state plan and the state planning process. A number of administrators felt the overall state planning process for vocational education has been improved over the last several years. The major underlying reason for the perceived improvement was attributed to the variety of mechanisms which have been instituted to include a wider group of participants in the planning process. Some comments were:

- Since the country is so big and the states so diverse, the federal law must be reflective of these differences if it is to be effective. Let states do their own planning, approve the plan, and then hold the states accountable (majority opinion).

- The state plan is one of the disappointments of the federal effort. If the federal expectations for its development are followed, the plan cannot be used as an effective planning tool at the state or local level (majority opinion).

- The proper use of local advisory councils is an effective planning method for improving the overall responsiveness of vocational programs (majority opinion).

- The formation of a state planning committee is an effective planning strategy. It provides a mechanism for involving groups who were previously not involved in the planning process. Because of the cooperation which has been developed, the state planning committee in some states would be maintained even if it were no longer mandated (additional point of interest).

Special populations. Administrators felt that over the last four to five years, vocational education has made improvements in its capability to address the needs of special populations. The federal thrust in this area was viewed as a significant and effective force in assisting in this effort. Most administrators also felt the federal government should maintain its emphasis in this area. This latter opinion was based on the reality that programs for serving special populations are extremely expensive; and without the added thrust from the federal level, the momentum in this area could not be maintained. Although the overall federal effort has been effective, most administrators were concerned about the federal excess cost requirements which were deemed counter-productive for developing programs for the disadvantaged and handicapped--a good idea that doesn't work. In addition, concern was expressed about the federal procedures related to the special population set-asides. There was an important need to develop approaches to be included in the legislation which provide an emphasis for the special population groups, and also provide flexibility to the states as to how that emphasis is implemented. The use of simple set-asides was viewed as an inadequate approach for achieving this dual need. Some comments were:

- Although vocational education has perhaps not provided sufficient emphasis for the special population groups in the past, recently there have been major and effective efforts for these population groups (majority opinion).

- There is a very strong need for the federal government to maintain an emphasis for serving the disadvantaged and handicapped. Local districts tend not to spend monies in these very expensive areas without an incentive (majority opinion).

- In understanding the history of vocational education's emphasis on disadvantaged and handicapped students, one should note that vocational education has not by design rejected these populations. It is important to recognize that vocational education at the school level is part of the overall educational enterprise which in general has not adequately served the special needs groups (additional point of interest).

- It is difficult to develop an understanding among some state legislators as to the emphasis placed on spending vocational education monies for the disadvantaged and handicapped. State legislators are spending such an extensive amount of dollars under other programs for these population groups; they do not understand why vocational dollars should also be targeted for these groups (additional point of interest).

Flexibility. There was widespread opinion that flexibility in the distribution of federal funds is beneficial. The majority felt that if more flexibility were to be extended to the states, the states could be more responsive to the federal initiatives, as well as, to local program needs. It was suggested that flexibility could be increased and accountability still maintained. Some comments were:

- The call for increased flexibility is not a call to eliminate accountability requirements. Most state and local administrators recognize that acceptance of federal monies necessitates accountability. It is also recognized that congress must establish national priorities for the federal monies. However, the states could be extended greater flexibility as to how they achieve the federal priorities. The greater flexibility would provide the states an opportunity to do a better job at accomplishing both federal and local priorities (majority opinion).

- The specification in the federal legislation of the exact percentage of monies for disadvantaged and handicapped is not an optimum strategy. More sensitive methods need to be developed for emphasizing special needs groups. (majority opinion).

- If vocational education is to be responsive to the federal initiatives, then the states need to develop a planning process which encourages local districts to move in the direction of the federal initiatives, and the federal government needs to provide greater fiscal support. (additional point of interest).

- There is an urgent need to have a quick response method for changing programming due to changes in the training needs of business and industry. Presently, most states do not have such a quick response capability. The lack of that capability is a major problem (additional point of interest).

State staff role. It was perceived that over the last several years, a trend has developed towards committing a greater proportion of state staff time to federal compliance activities, as opposed to, technical assistance activities related to improving vocational programs. Two factors were suggested as contributing to this trend--increased compliance requirements in the federal vocational education legislation, and increased responsibilities related to other federal and state acts such as the civil rights legislation.

Administrators were aware that the results of traditional technical assistance activities are not mutually exclusive from the results of compliance based activities. A number of the states in this study for example, had initiated activities prior to the 1976 Vocational Education Amendments in the same areas (e.g. planning, evaluation, and sex equity) which the federal legislation subsequently emphasized. Some comments were:

- There is a trend towards spending more state staff time on federal compliance requirements versus program development activities which have a direct effect on improving local vocational programming. The quality of the leadership provided by the state to local districts has suffered due to this shift in staff resources (majority opinion).

- The increased work load generated at the state office has not been the only negative impact of the additional federal compliance requirements. A problem has also occurred at the local level; they are having a difficult time handling the requirements and the associated paperwork. This is particularly true in small districts (additional point of interest).

- The implementation of the state agency's responsibility related to the civil rights guidelines is the most recent example of an activity consuming a significant amount of staff time. This was a particularly difficult problem since additional monies were not appropriated to carry on this responsibility (additional point of interest).

Additional considerations. In addition to the four previous considerations which were commonly discussed by administrators, several others were also addressed. Although these considerations were not talked about as frequently, they were deemed important. A

short paragraph is presented for each such consideration. The paragraph is a synthesis of the opinions of several discussants.

1. The present federal vocational education requirements related to maintenance of effort are causing a significant number of districts to reevaluate their participation in programs supported with federal monies. Alternative approaches should be investigated for local districts to indicate commitment.

2. Over the next several years vocational education needs to develop new approaches that will enable the delivery of programs which address both the needs of the individual and the needs of business and industry. As this development takes place, vocational education must ask itself at the secondary level whether it is desirable to train 16- and 17-year olds in specific skills, or whether the purpose of secondary vocational programs should be more exploratory in nature.

3. The concept of a single board for receiving federal funds is a critical issue. The state directors of vocational education strongly supported the idea of maintaining a single board. Moving away from this concept would add to the fragmentation of vocational education at a time when the need for articulation and coordination is critical. In general, administrators at the postsecondary level supported the opposite view. They felt the time had come to recognize the growing importance of postsecondary vocational education. Postsecondary vocational education was viewed as different from the secondary effort, and presently the difference is not sufficiently recognized. If a postsecondary board controlled the postsecondary funds, they would tend to be sensitive to the uniqueness of the program.

4. A renewed emphasis needs to be placed on the delivery of vocational education in the rural and urban areas. The economic and programming problems associated with this renewed emphasis, however, are formidable. Both creative programming and substantial resources will be needed.

State Staff

Equipment and teacher training. The area receiving the greatest consensus among state staff related to the need to direct additional resources and attention towards improving equipment and teacher training. They felt that maintaining existing equipment and acquiring new equipment are the greatest problems facing vocational education. This concern was expressed both for secondary and post-

secondary programs. A concomitant problem exists in relationship to teacher training. Due to changing technologies and responsibilities, existing vocational teachers are in need of retraining. Some comments were:

- The maintenance of existing equipment and the purchase of new equipment are the biggest problems which vocational education must address. Unless additional resources are committed, a crisis will exist by the end of the decade (majority opinion).

- Because of budget ceilings, tight money, and declining enrollments--local districts cannot spend significant amounts of money on vocational education equipment. It is also important to remember that the first obligation of local districts is to find money for classroom teachers (majority opinion).

- Since the rate of inflation is causing local districts to spend a larger share of their money on salaries, there is less and less money available for equipment and materials (majority opinion).

- Being able to spend federal monies for personnel training is extremely important. The method for allocating state vocational education monies in a number of states does not provide the opportunity for the state agency to spend state dollars on personnel training, and the local districts will not elect to because of the tight money situation (additional point of interest).

Flexibility. There was a widely expressed opinion that more flexibility in the methods for allocating funds to local districts would improve the overall responsiveness of local vocational programs. The diversity of needs which exists among local educational agencies during a particular time period is substantial. In addition, due to changes in the economy, the needs of a given district vary over time. The lack of flexibility has resulted in some local districts spending federal funds in less than an optimum fashion or in isolated cases, returning needed funds because requirements could not be satisfied. Some comments were:

- There is a need to provide more flexibility to the states in the distribution of federal funds. For example, if the concept of set-asides or geographic targeting is employed, then the overall responsiveness of the strategy could be improved by permitting the states to play a more significant role in how the concept is implemented (majority opinion).

- The flexibility to provide money to all districts is extremely important. This is true even though the amount of federal monies is small. Local superintendents can use the federal dollars to convince schools boards to spend local monies on vocational education. This is particularly important in the case of vocational education because the programs are more expensive due to equipment costs and lower teacher-to-student ratios. If used properly, the incentive effect of federal dollars to create additional local funds can be substantial (additional point of interest).

- The flexibility provided by the federal legislation for subpart III monies has been beneficial. An improvement might be to extend that flexibility across the two subparts. A requirement that a state spend some set minimum percentage of funds on subpart III, as opposed to, the present 20 percent could lead to increased responsiveness (additional point of interest).

Future programming. Diverse opinions were expressed concerning the direction which should be followed in developing secondary vocational programs in the 1980s. The opinions, however, could be subsumed under two general positions. First, some state staff expressed the opinion that vocational education should reemphasize its efforts in skill training. According to this position efforts which move programming in other directions simply dilute the overall quality of vocational education, particularly in times when the need is great for such basics as equipment maintenance and replacement. The other position was based on the opinion that a broader definition must be adopted if vocational education is to be responsive to the needs of the 1980s. The broader definition would, in addition to skill training, add an increased emphasis on developing an expanded role in the areas of career exploration, employability skills, and the basic skills (3R's). It is important to recognize that the two positions were not totally diametric, nor did either position represent a status quo philosophy. For example, state staff who held both positions suggested needs in such areas as: programming responsiveness to state economic development needs, sensitivity to the adult population group, and the declining productivity of American industry. Some comments were:

- Many youngsters have no concept of work or the use of basic tools. Vocational education must develop these concepts, as well as, provide opportunities for exploration. Many students use secondary vocational programs for vocational exploration, not preparation for a specific occupation (There was no majority opinion in reference to this consideration).

- The major purpose for vocational education is training students for jobs. In order to improve the capability for achieving that purpose, the federal legislation should increase its emphasis on: (1) subject matter identity, (2) support for maintenance of existing programs, (3) youth groups, and (4) program standards (There was no majority opinion in reference to this consideration).

- If vocational education is to be responsive, it is critical that increased sensitivity be developed for shifts in the client population such as increased number of minority group students and women re-entering the workforce (There was no majority opinion in reference to this consideration).

State staff role. In the nine states, there was general agreement that a trend has developed over the last several years in relationship to the role of the state staff. A greater proportion of the state staff's time is being committed to federal compliance activities, as opposed to, program development and improvement activities. Most agreed that this shift has reduced the leadership capacity of the state agency; and because of this reduction, the quality of local programs has suffered. Some comments were:

- The changes in technology, the limitations on local funding, and the decrease in the number of local vocational directors have contributed to an increased need for state leadership. However, state staff members are spending less time than ever before working with teachers (majority opinion).

- State staff are spending more and more time on activities related to fulfilling federal compliance activities. Moreover, this is also true among local directors of vocational education. The latter consideration is particularly a problem in small districts where local administrators have to assume two or three responsibilities. Consequently, the time for providing assistance to teachers tends to suffer (majority opinion).

- There appears to be a movement away from technical assistance responsibilities. However, it may well be a short-term problem as states develop more efficient ways to handle the additional federal compliance requirements (additional point of interest).

- One of the strategies for dealing with increasing demands from local districts and increasing federal requirements is to transfer more responsibilities

to the teacher educators for providing technical assistance to teachers. The long-term consequences of this strategy are presently unclear (additional point of interest).

Planning and data collection. Substantial support existed among state staff for improving planning and data collection capability. Most recognized that improved planning will lead to more responsive programs. At present, however, there was little support for the state plan. It was viewed mainly as a compliance document which required a significant amount of time to develop. The component of the overall planning process which received the highest praise was local advisory groups.

The issue of data collection and specifically the Vocational Education Data System (VEDS) surfaced frequently. The two major concerns relative to VEDS centered on the following areas: (1) the development of a complex system without the commitment of additional resources to get the job done and (2) a lack of understanding as to why such a high level of specificity of data elements is useful. Some comments were:

- The strict guidelines which must be followed in developing the state plan lead to the production of a compliance document--not a plan for the state. The key point is not to eliminate the state plan or other requirements such as the planning committee, but to allow the state plan to be a state plan (majority opinion).

- There is a solid need for developing good planning, evaluation, and reporting systems, but sufficient funds are not available; consequently, there is a tendency to borrow money from activities related to starting new programs (majority opinion).

- The Vocational Education Data System (VEDS) is difficult to implement. One of the hidden consequences is that so many resources are expended trying to get VEDS operational that other types of evaluation which address impact are being neglected (additional point of interest).

- The National Center for Educational Statistics has produced a meaningful reporting system. The data from VEDS were used to implement the desk audit requirements for the Office of Civil Rights, and it provided all the needed information. The key point to recognize is the time and cost to develop the system at the state level. VEDS is working in this state because of the substantial prior commitment that was made to establish a management information system (additional point of interest).

Special Populations. The topic of serving the needs of special population groups surfaced frequently. The primary issue was the use of set-asides for the disadvantaged and handicapped groups in the federal legislation. In reference to this issue, the opinions were divided into two major positions. According to the first position, the need to serve special needs populations is obvious; but because of the lack of increased funding, the extent of the emphasis given these groups by the federal legislation has had some negative consequences. Insufficient funds for such basics as equipment maintenance and updating are now a major problem. If sufficient resources are not directed toward these items, vocational education cannot be responsive to the needs of any client group.

The other position was based on the significant impact which federal dollars have had on this area. These staff members felt the federal government must maintain a strong emphasis on serving the special needs populations, and although the use of set-asides has a number of associated problems, it is an approach which has produced some positive results. The state staff who supported this position felt that without the federal emphasis, the momentum in this area would be lost. The loss would occur not because of lack of interest, but because of the lack of funds--in such expensive areas local districts will tend not to make up for decreases in federal funding.

The major considerations separating the two groups were: (1) general philosophy concerning the degree to which vocational education should address broad social goals and (2) amount of funds which the respective states appropriated for vocational education. The latter point is critical since states with small amounts of state dollars need the federal dollars for fulfilling basic program development needs. Some comments were:

- The categorical funding for disadvantaged and handicapped has caused programs to be offered to individuals who previously were not served. The categories, however, are too restrictive. It may be better to have one category for disadvantage and handicapped and allow the state and local people to decide the kinds of programs most needed (additional point of interest).

- The federal requirement of matching on excess cost for the disadvantaged and handicapped monies is a major problem. Poor districts don't have the matching monies; so the requirement in practice is working at cross-purposes with the intent of the legislation. (additional point of interest).

- One of the greatest need areas is to develop programs for the disadvantaged and handicapped in the rural areas (additional point of interest).

Additional considerations. In addition to the previously described six considerations which were commonly discussed by state staff, several others were also addressed. Although these considerations were not talked about as frequently, they were deemed important: These considerations were:

1. The federal maintenance of effort requirement is a problem for a number of local districts, particularly small districts. It is important to note that maintenance of effort does not correlate perfectly with true commitment. For example, a school can serve the same number of students for less money by replacing tenured staff with new teachers. Second, the maintenance of effort requirement tends to discourage jointly administered programs among school districts. In the future, there will be an increased need for such cooperative arrangements. The degree to which the federal maintenance of effort requirement is causing a problem varies from state to state; the difference is caused by a number of factors including the procedures which the state agencies have adopted to administer the requirement.

2. If the cooperation between vocational education and business and industry is to be increased, then it is essential to build incentives into federal legislation. In order to maximize the effectiveness of the incentives, the legislative strategies must be flexible, and the rules and regulations must be minimized. In addition, focus should be given to high-growth industries. Incentives should be provided to both education and to business and industry. If substantial cooperation is going to occur, then education will probably have to initiate it.

3. In general, there are a number of benefits associated with working closer with business and industry. The difficulty rests in developing the new frameworks and approaches for creating that cooperation, along with overcoming some of the historical operational problems.

Local Secondary Vocational Administrators

Funding. The most frequently discussed issue among local secondary vocational administrators was funding. Because of economic considerations and the additional responsibilities assumed by vocational education, there was a general concern about the capacity to maintain quality programs given present resources. The most frequently noted economic problems related to equipment. Given the present situation and a projection of a lack of increase in funding,

local administrators painted a very dismal picture in reference to equipment. In addition, a major point was made in most states about the importance of the federal dollar. Even though the amount of federal dollars is small relative to state and local dollars, its impact and importance were viewed as very significant. Some comments were:

- Although there is an overmatch (state and local compared to federal) of vocational education monies, the federal dollars cannot be removed without a significant negative impact. The importance of the federal dollar relates to the fact that approximately 80-85 percent of the local money for vocational education is for teacher salaries--very little local money is available for equipment, materials and other expenses. If the federal dollars are removed, some local districts will not replace them and some may even decrease their local spending (majority opinion).

- In the long run, geographic targeting of federal dollars is probably not an effective strategy. The idea of having some federal dollars for a majority of local districts is useful for a variety of reasons including the incentive it can provide in generating local dollars (additional point of interest).

- The tendency is to spread the federal money too thin--a little bit for every group. By the time the money gets to the district, there is not enough in each little bucket to accomplish very much (additional point of interest).

Future programming. In the nine states, a general recognition existed among secondary vocational administrators as to the need to develop new types of cooperative arrangements. This opinion appeared to be driven by economic concerns; that is, there was a recognition that cooperation in difficult economic times is necessary for survival. Some comments were:

- Because of the economic situation, there needs to be more cooperation among local districts in providing vocational programs, particularly in rural districts where the variety of programs are limited (majority opinion).

- A greater emphasis needs to be placed on encouraging cooperation with business and industry. New approaches need to be developed and implemented. This emphasis is particularly important given the increasing problems associated with updating equipment (majority opinion).

- As additional steps are taken to develop closer cooperation with business and industry, several problems need to be addressed. If an emphasis is placed on encouraging industry to provide equipment, special incentives are needed. Historically, a significant amount of equipment donated by industry has been either too complicated for entry-level training, obsolete, or worn out. If the on-site approach is emphasized, such classic problems as student transportation need to be addressed and given some new solutions (majority opinion).

- In considering the future, a higher emphasis needs to be placed on twenty-first century jobs. Vocational education needs to have a greater future orientation. For example, greater emphasis should be placed on high technology jobs (additional point of interest).

Paperwork. Although there usually is a concern at the local district level about the amount of paperwork, the frequency of the comments suggested that the paperwork problem in vocational education is particularly acute. Some comments were:

- One of the reasons for the paperwork problem is the duplication of requests called for by different state and federal acts and by different federal acts. This would not be a problem if all the requests involved the same definitions, but they do not. The definitions for disadvantaged students are a classic example (majority opinion).

- In general, there is a feeling of frustration at the local level concerning the paperwork associated with vocational education. It seems unclear whether the amount of paperwork or the lack of a solid system for getting the job done is the problem (majority opinion).

- The reduction in the number of districts which have administrators responsible for vocational education has added to the paperwork problem. Now, someone who is not as familiar with vocational education and who has two or three other responsibilities is responsible for getting the paperwork completed (additional point of interest).

Additional considerations. In addition to the three previously described considerations which were commonly discussed by local secondary administrators, several others were also addressed. Although these considerations were not talked about as frequently, they were deemed important. These considerations were:

1. A problem has emerged in recent years in the federal-state-local partnership in vocational education. The problem arises when a state has initiated an effort in a given area and the federal legislation subsequently places a major emphasis on that same area. There is a tendency to have the states start over again if their efforts do not match the federal approach; this tendency can be a major problem. Some examples of areas in which this has happened are: data collection systems, financial accounting systems, and sex equity.

2. A significant relationship between CETA and the secondary schools has not yet materialized. The success stories, and indeed there are some, tend to be the result of personal rapport between a particular vocational educator and a particular CETA representative. There are a number of operational problems such as: different fiscal years, different reports, different evaluation requirements, and different rules and requirements which make cooperation difficult. In addition, there is a fundamental difference which amounts to the education vs. training argument. In order for substantial efforts to occur, legislative mandates with incentives will be required.

3. When the future of vocational education is considered, the impact of proficiency testing laws should be examined. One of the results of proficiency examinations is that high schools are instituting more remedial courses to assist students to pass the examinations. This movement may have a significant number of implications for vocational education. For example, one negative implication is lack of time to enroll in vocational courses due to the class hours spent in remedial courses.

Postsecondary and CETA Administrators

Equipment. There was a prevailing opinion among postsecondary administrators that equipment-related expenses are the single greatest need for postsecondary vocational education. A major point was made as to the severity of the problem. A significant number of discussants suggested that a major crisis is developing. There was a general recognition that new approches for working with business and industry would be beneficial for addressing the problem, but a caution was extended that business and industry cooperation is not the total answer for maintaining quality vocational programs. Some comments were:

- The greatest need for improving the quality of post-secondary vocational programs is equipment. Industry is demanding that training be done on the latest equipment, but such training is no longer possible. The greatest need is in high technology areas. Working with industry is a partial solution, but the community colleges still need at least up-to-date basic equipment in order for industry to be receptive to accepting their students (majority opinion).

- In some program areas, students have returned after graduation and reported that the program was obsolete. In understanding the equipment problem, it is important to note that all areas are not equally affected. The affected areas are obviously those which are undergoing rapid changes; electronics is now the best example. Unless some changes are made, specialized skills will not be taught in these areas; instead the programs will emphasize theory and general principles--specialized skills will have to be learned on the job (majority opinion).

- One of the commonly suggested solutions to the equipment problem is to work on-site with business and industry. This solution is a good one for some training areas and for the cities. On-site training is, however, only a partial solution to the equipment problem. Getting industry to help on a wide scale is going to require a good sales job (additional point of interest).

- In order to aid the cooperation with business and industry, it would be helpful if the federal legislation really put some money behind such cooperation. Various types of approaches should be tried (additional point of interest).

- It is unrealistic to expect business and industry to equip community colleges. They do help, but there is a limit to what industry can do. In many parts of some state, there are no major industries (additional point of interest).

- In order to understand the equipment problem, it is important to realize that previously the federal monies were used to update equipment and for other improvements. Now, that condition is no longer true--given the federal set-asides plus fewer local monies, the limited federal dollars are being spent for basic costs (additional point of interest).

Future programming. Because of the diversity of the situations of postsecondary administrators, there were not commonly held opinions concerning the direction of future programming. However, there was general agreement that due to changing demographics, upgrading and retraining needs of incumbent workers, and the reentrance of women into the work force--the demand upon the services of postsecondary institutions will continue to increase. Some comments were:

- In thinking about the future of postsecondary vocational education, one must recognize that community colleges and other postsecondary institutions are something other than the 13th or 14th grades of high schools (additional point of interest).

- The future of vocational education at the postsecondary level will be characterized by more diversity. The existing structured courses will still be there, but in addition there will be more short-term, intensive, specialized efforts to respond to the CETA client and to respond to the needs for upgrading and retraining incumbent workers. There will be a substantial need for placing more emphasis on upgrading workers in a single highly specialized skill; this emphasis will demand special courses, not total programs (additional point of interest).

- There is a high priority need to institute efforts to achieve better articulation between secondary and postsecondary programs (additional point of interest)

CETA linkage. Postsecondary and CETA representatives reported isolated success stories concerning CETA linkages. They also reported that progress had been achieved in the last several years in developing communication channels and in developing an awareness of respective needs and concerns. The prevailing opinion, however, was that linkage between CETA and postsecondary vocational education is not presently effective on a pervasive scale. A number of operational and education philosophy questions need to be addressed before a high level of effectiveness can be achieved. Both groups felt additional incentives are needed in the vocational legislation if substantial progress is to be achieved. Some comments were:

- CETA clients need short, intensive, specialized programs to provide them the skills needed on the job. They also need substantial support services. Many postsecondary institutions emphasize programs which include courses which are nice to have, but are not necessary for job placement. Because CETA clients are paid stipends and other support costs, long programs become very expensive (CETA representatives - majority opinion).

- o CETA clients need programs designed to serve their needs. These programs must have open-entry/open-exit policies, flexible scheduling, and a strong support component (CETA representatives - majority opinion).

- o Because of state funding procedures, community colleges are forced into being concerned about enrollment. On the other hand, CETA is concerned about placement. This difference causes many problems (CETA representatives - additional point of interest).

- o There are some operational problems which are barriers for developing linkage with CETA. For example, CETA can only talk about funding for one year. A second problem is the different funding timeframes (fiscal years) for CETA versus the community colleges (postsecondary representatives - majority opinion).

- o Given the present trends, there is a distinct possibility that a dual system for delivering skill training will be created; our nation cannot afford the consequences of that development (postsecondary representatives - additional point of interest).

- o There is a distinction between training and education. Community colleges are interested in education; CETA is interested in very specific skill training. This basic difference makes cooperation difficult (postsecondary representatives - additional point of interest).

Additional considerations. In addition to the previously described three considerations which were commonly discussed, two others were also addressed. Although these considerations were not talked about as frequently, they were deemed important. These considerations were:

1. Over the last several years, there has been a shift in the nature of the assistance received at the local level from the state agency. The shift can be characterized as a shift from supervision to consultation. The long-term consequences of this shift are unclear.

2. The federal money has had significant impact in the areas of disadvantaged and handicapped. If the set-aside monies were removed, local institutions would tend not to replace the withdrawn funds. The reason is economic. Those programs are very expensive and serve a small number of students. State money is based on full-time equivalent counts: more students--more money. In these times, the institutions need money.

Summary

The results section provides a rich information base for improving the responsiveness of state divisions of vocational education in carrying out their responsibilities for vocational education. In that section, the information was analyzed across states and presented for each of the four groups with whom discussion sessions were held. The purpose of this section is to summarize the results across the four groups and highlight those single issues and considerations which were deemed particularly important. A summary of the results follows:

1. Because of local budget spending limitations, increases in teacher salaries, rising equipment costs, and the public's mood of fiscal conservatism, there was widespread concern among state and local education officials as to their economic capability to maintain high quality programs in vocational education.

2. The most common need among state and local vocational educators related to directing additional resources and attention towards equipment and teacher retraining. At both the secondary and postsecondary level, the maintenance of existing equipment and the acquisition of new equipment in response to changing technology were viewed as the greatest operational problems facing vocational education. A concomitant problem existed in relation to teacher retraining.

3. If more flexibility were extended to the states in reference to allocating federal funds, the states could be more responsive to both the federal initiatives and to local district needs. This expressed need was based on such considerations as: (1) the diversity of the vocational education programming needed across and within states, (2) the rapidity of changes in the needs of business and industry, (3) the need to develop a quick response capability to provide greater assistance in achieving state economic development goals and, (4) the need to develop new cooperative arrangements with business and industry.

4. Although there were perceived improvements in the overall planning process, limited support existed for the state plan among state and local vocational educators. This lack of support originated from the perception that the state plan is a federal compliance document, rather than a blueprint of state policy or action.

5. Most state and local education officials felt that vocational education has improved its capability to address the needs of special population groups. Although a majority felt the federal government should maintain its emphasis in this area, concern was expressed about the federal excess cost requirements which were deemed counterproductive for developing programs for the disadvantaged and handicapped. In addition, a need was expressed to develop federal legislative approaches which emphasize programming for special needs populations and also provide flexibility to the state as to how that emphasis is implemented. The present use of set-asides was viewed as a less than optimum strategy for achieving this dual need.

6. Most state level vocational educators held the opinion that a reduction has occurred in the last three to four years in the percentage of staff resources committed to traditional technical assistance activities (for example, equipment planning, curriculum selection, personnel retraining, facility planning and youth organizations). They felt this reduction has negatively affected the quality of state leadership, and ultimately the reduction will lead to a decline of the quality of local programs. It was suggested that the major causal factors for the reduction were: (1) increased demands related to satisfying federal vocational legislation compliance requirements (for example, state plan development, accountability report preparation, and data collection activities related to VEDS); and (2) increased demands from other federal and state legislation such as the responsibilities associated with the Office of Civil Rights requirements.

7. There were two major positions expressed as to the desired future direction of secondary vocational education. The first position centered on the need to re-emphasize skill training. According to this position, the goal of vocational education is to train students for job placement; therefore, resources allocated for other purposes simply dilute the effectiveness of the program. The other position was based on the opinion that a broader definition of vocational education must be adopted if the program is to be responsive in the 1980s. This broader definition would include, in addition to skill training, an increased emphasis in the areas of occupational exploration, employability skills, and the basic skills (3 R's). Both positions were strongly supported by their proponents.

8. Although isolated success stories were reported concerning vocational education and CETA linkage, the prevailing opinion was that linkage between vocational education and CETA is not presently effective on a pervasive scale. There are a number of operational problems such as: different fiscal years, different reporting requirements, and different evaluation procedures which are barriers against effective linkage. In some cases, additional differences existed which were based on the distinction between education versus training. It was generally agreed that legislative mandates with incentives will be necessary for a substantial increase in the collaboration between CETA and vocational education.

9. There was general agreement among postsecondary vocational educators that more emphasis needs to be placed on developing cooperative arrangements with business and industry. This additional effort would include not only developing new approaches for executing existing arrangements, but also developing new types of arrangements for achieving new goals. A caution was extended, however, that cooperative arrangments with business and industry are not a total answer for maintaining quality vocational programs.

10. Although the federal funds are greatly overmatched with state and local dollars, it was considered a major fallacy that federal support could be withdrawn without negative impact. Because of local educational financing considerations, there is not local money to replace withdrawn federal funds. The areas which would be most affected by the removal of federal dollars would be those areas which relate to upgrading existing programs and instituting new programs. Because of the perceived changes which vocational education must institute in order to be responsive in the 1980s, the importance of new programs, and hence the importance of federal support was deemed particularly critical.

Recommendations

The following recommendations are provided as an information base for improving the responsiveness of state divisions of vocational education:

Future Services

State divisions of vocational education should place increased emphasis on re-examining the nature of their services since the economic, political, and organizational trends which will influence vocational education in the 1980s will create a need for greater diversity--greater diversity in terms of clients to be served, types of services to be delivered and delivery methods to be employed. In light of the greater diversity, the leadership which provided the impetus to develop high quality programs in the 1970s may not be responsive in the 1980s. Because the new programming needs will be diverse across and within states, the federal legislation and the accompanying rules and regulations should possess the increased flexibility needed by divisions of vocational education to plan and execute these new efforts.

State Leadership

In order to increase their responsiveness in the 1980s, state divisions of vocational education will need to increase their capability to provide both leadership in the traditional occupational areas and in new functional areas such as economic development, access equity and methods for increasing the productivity of American industry. A capability in only one of the two areas will not be adequate. In order to be responsive to this dual responsibility, divisions of vocational education will need to develop new types of collaborative arrangements and re-examine their organizational structures and staffing patterns.

Compliance Requirements

Before new compliance requirements are proposed for divisions of vocational education, the federal government should place increased emphasis on assessing the benefits to be achieved versus the costs to be incurred. The importance of the assessment increases when additional funds are not appropriated to plan and execute the new requirements and when the requirements do not relate directly to improving local vocational programs. The assessment should take into account that a reduction has already occurred in the percentage of state level resources committed directly to improving the quality of local vocational programs.

State Planning

State divisions of vocational education should continue to place an emphasis on improving the state and local planning process for vocational education, particularly in relation to involving a wide variety of participants in the planning process. In order to provide the basis for substantial improvement in the planning process, the federal government should re-examine the nature of the state plan. The re-examination should focus on establishing a basis for state divisions of vocational education to develop a state plan which is in greater agreement with the realities of how planning is actually accomplished at the local and state level. In the long term a movement in this direction will enable state divisions of vocational education to be more responsive to both local and federal priorities.

Cooperative Arrangements with Business and Industry

State divisions of vocational education should develop new approaches for executing existing types of cooperative arrangements with business and industry and explore the mutual benefit of developing new types of collaboration with business and industry. The federal government should facilitate the expansion of these cooperative arrangements by providing incentives in the federal legislation. In order to maximize the effectiveness of the incentives, the legislative strategies should be flexible and the rules and regulations should be minimized.

Special Client Populations

The federal government should continue to place an emphasis on service to special client populations. Alternative approaches, however, need to be developed which provide an emphasis for programs for special client populations and also provide the flexibility needed by divisions of vocational education to be responsive to the diversity of the conditions which exist in their respective states.

CETA Linkage

State divisions of vocational education should provide increased leadership and technical assistance to local educational agencies for developing the short, intensive specialized programs which are required to be responsive to CETA clients. To provide divisions of vocational education the support required to execute more substantial and pervasive linkages between CETA and vocational education, new incentives should be included in the federal vocational education legislation and in the CETA legislation. In addition, the CETA

and vocational education rules and regulations should be made more compatible in relation to operational considerations such as reporting requirements, funding issues, and evaluation procedures.

CHAPTER III

STAFFING SURVEY

METHOD

Introduction

The purpose of this part of the study was to develop a demographic and professional profile of state level vocational education staff members. A mailed survey questionnaire was selected as the most effective method for collecting the required information.

Because of the importance of the relationship between staffing characteristics and institutional leadership capacity, the survey results are a viable data base for examining the responsiveness of state divisions of vocational education. The survey provides a comprehensive description of state staff in the following four areas:

1. Educational background
2. Job experience background
3. Demographic characteristics (years in position, sex, age, ethnicity, etc.)
4. Level of expertise in selected speciality areas such as economic development, planning, and basic skills instruction

Instrument Development

The survey instrument was designed and developed by the National Center project staff. The first draft of the instrument was completed in March, 1980, and submitted to an in-house review panel. The six panel members were selected based on the following criteria:

1. Prior professional experience in a division of vocational education
2. Current interaction with representatives from divisions of vocational education
3. Prior survey research experience

The second draft of the instrument was developed based on the panel's feedback. In order to maximize the sensitivity of

the instrument to concerns of the respondent group, the second draft was forwarded to a special advisory committee which included the following national leaders: Jim Galloway, Illinois state director; Clarence Burdette, West Virginia state director; and Gene Lehrmann, past state director in Wisconsin. In addition to these reviewers, the instrument was forwarded to Garth Yeager, CEIS Monitor.

Based on feedback from the above noted individuals and subsequent feedback from Frank Corrigan, executive director of FEDAC, final FEDAC clearance for the survey was received on October 3, 1980.

Sample Selection

In order to obtain a comprehensive data base, all fifty states were invited to participate in the study. The first step in the selection process was a letter of invitation from the executive director of the National Center to the director of vocational education in each state.

As a second step, a follow-up phone conversation was held with each state director. If the state director elected to participate in the study, the project staff member requested that a liaison person be appointed from the state staff. In addition, an approximation of the number of staff members was obtained in order to determine the number of survey instruments to forward to each state. Of the fifty states, forty-eight volunteered to participate in the study. The states of Washington and Tennessee elected not to participate.

The sample included all permanent, professional vocational education state agency staff members. Staff who worked in the area of vocational education but were located in other divisions, as well as, staff who worked in divisions of vocational education were included. State agency staff who worked less than 50 percent of their time in the area of vocational education were not included in the study.

Data Collection

The first step in the data collection procedure involved mailing the predetermined number of survey instruments to the contact person in each state. The contact person was responsible for disseminating the survey questionnaires to the appropriate staff members. Two methods for returning the questionnaires were established. Following the first method, staff members returned the surveys in the self-addressed, stamped envelopes to the contact person for a single return mailing. Following the second method, staff members returned

the questionnaires directly to the National Center. The selection of which return procedure to use was determined by the contact person in each state. Instructions were provided that the surveys should be anonymous.

The questionnaires were mailed to the participating states during the period of October 29-31, 1980. The contact person was initially requested to have the questionnaires completed by the participating staff members and returned to the National Center within three weeks (November 21, 1980). In order to increase the response rate, two follow-up procedures were employed. On November 14, 1980, twenty-nine states were contacted by mailgrams. On December 1 and 2, phone contact was made with ten states which had a low response rate as a final effort to secure additional questionnaires. The date of December 24, 1980, was established as the final deadline for surveys to be included in this report of the study.

Data Analysis

A total of 1,819 survey questionnaires were included in the analysis. For the forty-eight participating states, this number constitutes an 81 percent response rate.

For this report, a frequency and percentage analysis was conducted for each item on the questionnaire. In order to increase the usability of the analysis, the responses for each item were cross-tabulated by state population size categories. The states were divided into three size categories based on the total population of the state. Table 3.1 depicts the size category for each state. The detailed analysis for each item is presented in tabular form in Appendix A along with an explanation of how to interpret the table format used to present the results. A copy of the survey instrument is provided in Appendix B. A select number of the results presented in Appendix A are highlighted in the results section which follows.

Result Highlights

The detailed presentation of the survey results are presented in tabular form in Appendix A. The purpose of this section is to highlight a small sample of the results in order to provide the reader an indication of the type of information which can be obtained by reviewing the tabular data. Because of the substantial amount of information contained in the sixty-one tables, this section should not be viewed as a comprehensive summary of the data.

When the survey was conducted, the contact person in each

TABLE 3.1

STATE POPULATION SIZE CATEGORIES

Small Less Than 1,000,000	
Alaska	New Hampshire
Delaware	North Dakota
Hawaii	Rhode Island
Idaho	South Dakota
Montana	Vermont
Nevada	Wyoming
Medium **1,000,001 - 5,500,000**	
Alabama	Louisana
Arizona	Maine
Arkansas	Maryland
Colorado	Minnesota
Connecticut	Mississippi
Georgia	Missouri
Indiana	Nebraska
Iowa	New Mexico
Kansas	Oklahoma
Kentucky	Oregon
South Carolina	West Virginia
Utah	Wisconsin
Virginia	
Large **5,500,001 or More**	
California	New York
Florida	North Carolina
Illinois	Ohio
Massachusetts	Pennsylvania
Michigan	Texas
New Jersey	

U.S. Department of Commerce, Bureau of the Census. Statistical Abstracts of the United States. 100th ed. Washington, D.C.: U.S. Government Printing Office, 1972.

state was also requested to provide a full time staff equivalent count by area of responsibility for their vocational education staff. A summary of this information is presented in Tables 3.2 and 3.3. The detailed information is presented in tabular form in Appendix D.

The result highlights are presented in the following paragraphs. For each highlight the specific table in Appendix A which presents the detailed information is indicated.

Gender (Table A.59)

During the last four years, divisions of vocational education have made a substantial commitment to hiring more women. When all state staff members are considered, 28 percent are women and 72 percent are men. However, if the data are examined for recently hired staff, the percentages are strikingly different. Considering staff who have been hired in the last two to four years, 38 percent are women; for staff hired within the last year, 47 percent are women.

Age (Table A.61)

There has been a definite trend to hire younger staff in divisions of vocational education. For example, 16 percent of the staff hired within the last year are under 31 years of age, as compared to 6 percent for the total population of state staff. A similar difference is also true when the figures for the 31 to 35 age category are examined. Twenty-eight percent of the staff hired within the last year are in that category; whereas, for the total state staff only 15 percent are in the 31 to 35 age category.

Ethnicity (Table A.57)

When all state staff are considered, 9 percent of the staff are members of a minority group. When the figures for recently hired state staff are examined, there is a small increase in that percentage. For example, 11 percent of the staff hired within the last 2 to 4 years and 14 percent of the staff hired within the last year are members of a minority group.

Rural Versus Urban Background of State Staff (Table A.58)

On the survey questionnaire an estimation of the rural versus urban background of state staff was obtained. The following question was asked: "During the ages 14-17, which of the following describes the population of the area in which you lived? If you moved during those years, check the response where you lived the greatest period of time." When the results of this question are analyzed, a large percentage

Table 3.2

Full Time Staff Equivalent Count
For Survey States by Areas
of Responsibility

Area of Responsibility	FTE
Administration	244
Adult Education	75
Agricultural Education	170
Business/Office Ed	117
CETA	154
Consumer/Home Ec.	156
Curriculum	46
Disadvantaged	53
Distributive Education	92
Evaluation	44
Guidance	57
Handicapped	30
Health Occupations Ed.	67
Industrial Arts	51
Personnel Development	29
Planning	64
Postsecondary	64
Research	66
Sex Equity	56
Technical Education	16
Trade and Industries	162
Management Inf.	64
Civil Rights	49
Other	310
Total	2,234

Table 3.3

Full Time Staff Equivalent Count
for Survey States by
Individual States

State	FTE	State	FTE
Alabama	61	Missouri	50
Alaska	15	Montana	16
Arizona	22	Nebraska	53
Arkansas	35	Nevada	8
California	65	New Hampshire	24
Colorado	47	New Jersey	67
Connecticut	46	New Mexico	21
Delaware	14	New York	127
Florida	94	North Carolina	50
Georgia	68	North Dakota	20
Hawaii	7	Ohio	103
Idaho	24	Oklahoma	111
Illinois	60	Oregon	17
Indiana	21	Pennsylvania	83
Iowa	44	Rhode Island	17
Kansas	19	South Carolina	52
Kentucky	59	South Dakota	12
Louisiana	35	Texas	104
Maine	25	Utah	19
Maryland	41	Vermont	10
Massachusetts	80	Virginia	50
Michigan	51	West Virginia	44
Minnesota	72	Wisconsin	94
Mississippi	66	Wyoming	11
		Total	2,234

Tennessee: Non-Participant

Washington: Non-Participant

(33 percent) of the total state staff lived in communities of twenty-five hundred or less. This percentage is approximately the same for staff hired within the last four years.

Years Employed in a Vocational Education Position (Table A.5)

In order to determine the tenure of state staff, the following question was included on the survey: "How many years have you been employed in a vocational education position in your present state agency?" When the total state staff are considered, approximately one-third have been hired within the last four years. When the data is analyzed by state size categories, small states have a particularly large percentage of staff hired within that period (43 percent).

Years Employed in Present Position (Table A.6)

In addition to the above noted tenure question, the following question was also included on the survey: "How many years have you worked in your present position?" For the total state staff, the results indicate that 50 percent of the staff have been in their present position for a period of four years or less. The results are the same for small, medium, and large size states. These results, coupled with the results for the previous question, indicate that a large number of staff are new to their state agency and that an even larger number are new to their present position.

Educational Background of State Staff (Table A.11, A.14 and A.16)

A vast majority of the total state staff members hold a degree at a master's level or higher (86 percent). Sixty-six percent hold a master's degree, 5 percent hold an educational specialists degree, and 15 percent hold a doctor's degree. The percentage figures are approximately the same for small, medium, and large states. The most commonly held degree at both the master's level (15 percent) and doctor's level (36 percent) is in administration and supervision.

Job Experience Background (Tables A.17 - A.29)

On the survey questionnaire a measure of the job experience background of state staff was obtained. The most common background among state staff members is vocational education teaching at the secondary level. Fifty-seven percent of the total have secondary vocational education teaching experience, and 39 percent have five years or more experience in that area. Whereas a large percentage of the total state staff have secondary vocational teaching experience, only 15 percent of the staff members have vocational teaching experience at the postsecondary level. It is also important to note that 37 percent of the total

have experience working in business and industry.

Job Experience Background in Speciality Areas (Table A.32 - A.44)

In addition to measuring the work experience background relative to type of position, a measure of work experience relative to selected speciality areas was also obtained. Of the thirteen speciality areas which were measured, the areas in which the largest percentage of state staff members have experience are: administration (60 percent), program evaluation (46 percent), and planning (42 percent). The speciality areas in which the smallest percentage of state staff members have experience are: economic development (9 percent), limited English-speaking populations (9 percent), and sex equity (12 percent).

Educational Background in Speciality Areas (Table A.45-A.56)

Because of their importance, a measure was obtained of the degree to which the respondents' education (degree programs, as well as, seminars, workshops and other training programs) had provided a background in the selected speciality areas. The areas in which the largest percentage of state staff members have an extensive background are: administration (49 percent), program evaluation (36 percent) planning (35 percent), and personnel training (25 percent). The speciality areas in which the largest percentage of state staff members have only a limited background are: limited English-speaking population (83 percent), economic development (62 percent) sex equity (58 percent) and basic skills (3 Rs) instructional techniques (51 percent).

APPENDIX A

DEMOGRAPHIC AND PROFESSIONAL PROFILE OF STATE AGENCY VOCATIONAL EDUCATION STAFF

EXPLANATION OF TABLE FORMAT

Table A

Crosstabulation of Sex and State Size Categories

	COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
FEMALE	1.	44	256	203	503
		8.7	50.9	40.4	28.0
		27.3	28.1	28.1	
		2.4	14.3	11.3	
MALE	2.	117	656	520	1293
		9.0	50.7	40.2	72.0
		72.7	71.9	71.9	
		6.5	36.5	29.0	
	COLUMN TOTAL	161	912	723	1796
		9.0	50.8	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 23

This explanation is presented to provide an understanding of the format used to present the tabular data in this appendix. A crosstabulation format is used for all the tables and each table contains four figures per cell, as well as, row and column totals.

Table A presents a crosstabulation of the respondents by sex and by size of state. The states participating in the survey were categorized as small, medium or large based on the size of the total population of the state.

The data in Table A indicates that 1,796 people replied to the survey question which called for the respondents to indicate sex. Of that total, 72.0 percent (1,293) were male and 28.0 percent (503) were female. Examining the column totals, 161 (9.0 percent) of the 1,796 respondents were from small states and 723 (40.3 percent) were from large states.

Table A contains eight cells, with each cell containing four figures. For example purposes, an explanation of the cell containing the data for females from small states will be presented. Of the 503 females who responded, the first two numbers in the cell indicate that forty-four or 8.7 percent (44/503) were from small states. The third number in the cell indicates that 27.3 percent (44/161) of the 161 respondents from small states were females. The last number indicates that of all the 1,796 respondents, 2.4 percent (44/1,796) were females from small states.

The number of missing observations indicates the number of respondents who completed a questionnaire but who did not respond to either the question concerning sex or the question concerning the respondent's state.

Table A.1

Crosstabulation of Position Classification
and State Population Size
(Small, Medium, Large)

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
STATE DIRECTOR 1.	12 31.6 7.4 0.7	17 44.7 1.9 0.9	9 23.7 1.2 0.5	38 2.1
DEPUTY- ASST DIR 2.	15 11.7 9.3 0.8	69 53.9 7.5 3.8	44 34.4 6.1 2.4	128 7.1
SUPERVI-PGM AREA 3.	71 13.0 43.8 3.9	300 55.0 32.8 16.6	174 31.9 24.0 9.7	545 30.2
COORDINATOR 4.	34 12.3 21.0 1.9	153 55.4 16.7 8.5	89 32.2 12.3 4.9	276 15.3
PROGRAM SPECIALI 5.	15 3.2 9.3 0.8	226 48.0 24.7 12.5	230 48.8 31.7 12.8	471 26.1
FUNCTN SPECIALI 6.	15 4.4 9.3 0.8	149 43.3 16.3 8.3	180 52.3 24.8 10.0	344 19.1
COLUMN TOTAL	162 9.0	914 50.7	726 40.3	1802 100.0

NUMBER OF MISSING OBSERVATIONS = 17

Table A.2

Crosstabulation of Area of Responsibility
and State Population Size
(Small, Medium, Large)

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
1. ADMINISTRATION	25 10.6 12.7 1.2	125 52.7 12.2 6.1	87 36.7 10.6 4.3	237 11.6
2. ADULT ED	2 4.0 1.0 0.1	24 48.0 2.3 1.2	24 48.0 2.0 1.2	50 2.5
3. AGRICULTURAL ED	10 7.8 5.1 0.5	71 55.5 6.9 3.5	47 36.7 5.8 2.3	128 6.3
4. BUSINESS & OFFIC	10 9.6 5.1 0.5	53 51.0 5.2 2.6	41 39.4 5.0 2.0	104 5.1
5. CETA	10 7.0 5.1 0.5	67 47.2 6.5 3.3	65 45.8 8.0 3.2	142 7.0
6. CONS & HOME ECON	10 8.0 5.1 0.5	64 51.2 6.2 3.1	51 40.8 6.2 2.5	125 6.1
7. CURRICULUM	6 12.5 3.1 0.3	33 68.8 3.3 1.6	9 18.7 1.1 0.5	48 2.4
8. DISADVANTAGED	6 11.1 3.1 0.3	29 53.7 2.8 1.4	19 35.2 2.3 0.9	54 2.6
9. DISTRIBUTIVE ED	8 10.2 4.1 0.4	36 46.2 3.5 1.8	34 43.6 4.2 1.6	78 3.8
10. EVALUATION	7 15.2 3.6 0.3	18 39.1 1.6 0.9	21 45.7 2.6 1.1	46 2.3
11. GUIDANCE	5 10.0 2.5 0.2	32 64.0 3.1 1.6	13 26.0 1.6 0.6	50 2.3
12. HANDICAPPED	6 13.3 3.1 0.3	26 57.8 2.5 1.3	13 28.9 1.6 0.6	45 2.2
13. HEALTH OCCUP	6 9.8 3.1 0.3	30 49.2 3.0 1.5	25 41 3.1 1.2	61 3.0
14. INDUSTRIAL ARTS	6 11.1 3.1 0.3	25 46.3 2.4 1.2	23 42.6 2.8 1.1	54 2.6

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
15. PERSONNEL DEVT	3 9.4 1.5 0.1	18 56.2 1.8 .9	11 34.4 1.3 .6	32 1.6
16. PLANNING	10 12.5 5.1 0.5	34 42.5 3.3 1.6	36 45 4.4 1.8	80 3.9
17. POSTSECONDARY	5 11.6 2.5 0.2	17 39.6 1.7 0.8	21 48.8 2.6 1.1	43 2.1
18. RESEARCH	8 13.3 4.1 0.4	31 51.7 3.0 1.5	21 35 2.6 1.1	60 2.9
19. SEX EQUITY	9 20.5 4.6 0.4	20 45.5 2.0 1.0	15 34 1.8 0.8	44 2.2
20. TECHNICAL ED	3 17.6 1.5 0.1	8 47.1 0.8 0.4	6 35.3 0.7 0.3	17 0.8
21. TRADE & INDUST	9 6.3 4.6 0.4	77 53.7 7.5 3.8	57 40 7.0 2.8	143 7.0
22. MANAGEMENT ED	5 7.6 2.5 0.2	31 47 3.0 1.5	30 45.4 3.7 1.5	66 3.2
23. CIVIL RIGHTS	1 5.9 1.0 0.1	10 29.4 1.0 0.5	22 64.7 2.7 1.1	34 1.7
24. OTHER	26 8.7 13.2 1.3	146 48.8 14.2 7.2	127 42.5 15.7 6.2	299 14.7
COLUMN TOTAL	197 9.7	1085 50.2	810 40.2	2040 100

Table A.3

Crosstabulation of Participating States
and State Population Size
(Small, Medium, Large)

	COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
ALABAMA	1.	0 0.0 0.0 0.0	56 100.0 6.1 3.1	0 0.0 0.0 0.0	56 3.1
ALASKA	2.	9 100.0 5.6 0.5	0 0.0 0.0 0.0	0 0.0 0.0 0.0	9 0.5
ARIZONA	3.	0 0.0 0.0 0.0	20 100.0 2.2 1.1	0 0.0 0.0 0.0	20 1.1
ARKANSAS	4.	0 0.0 0.0 0.0	27 100.0 2.9 1.5	0 0.0 0.0 0.0	27 1.5
CALIFORNIA	5.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	42 100.0 5.8 2.3	42 2.3
COLORADO	6.	0 0.0 0.0 0.0	41 100.0 4.5 2.3	0 0.0 0.0 0.0	41 2.3
DELAWARE	8.	13 100.0 8.0 0.7	0 0.0 0.0 0.0	0 0.0 0.0 0.0	13 0.7
FLORIDA	9.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	90 100.0 12.3 5.0	90 5.0
GEORGIA	10.	0 0.0 0.0 0.0	56 100.0 6.1 3.1	0 0.0 0.0 0.0	56 3.1
HAWAII	11.	7 100.0 4.3 0.4	0 0.0 0.0 0.0	0 0.0 0.0 0.0	7 0.4
IDAHO	12.	24 100.0 14.8 1.3	0 0.0 0.0 0.0	0 0.0 0.0 0.0	24 1.3
ILLINOIS	13.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	67 100.0 9.2 3.7	67 3.7
INDIANA	14.	0 0.0 0.0 0.0	21 100.0 2.3 1.2	0 0.0 0.0 0.0	21 1.2
IOWA	15.	0 0.0 0.0 0.0	36 100.0 3.9 2.0	0 0.0 0.0 0.0	36 2.0
KANSAS	16.	0 0.0 0.0 0.0	17 100.0 1.9 0.9	0 0.0 0.0 0.0	17 0.9
KENTUCKY	17.	0 0.0 0.0 0.0	52 100.0 5.7 2.9	0 0.0 0.0 0.0	52 2.9
LOUISIANA	18.	0 0.0 0.0 0.0	35 100.0 3.8 1.9	0 0.0 0.0 0.0	35 1.9
MAINE	19.	0 0.0 0.0 0.0	17 100.0 1.9 0.9	0 0.0 0.0 0.0	17 0.9
MARYLAND	20.	0 0.0 0.0 0.0	35 100.0 3.8 1.9	0 0.0 0.0 0.0	35 1.9
MASSACHUSETTS	21.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	74 100.0 10.2 4.1	74 4.1
MICHIGAN	22.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	50 100.0 6.9 2.8	50 2.8
MINNESOTA	23.	0 0.0 0.0 0.0	39 100.0 4.3 2.2	0 0.0 0.0 0.0	39 2.2
MISSISSIPPI	24.	0 0.0 0.0 0.0	48 100.0 5.2 2.7	0 0.0 0.0 0.0	48 2.7
MISSOURI	25.	0 0.0 0.0 0.0	49 100.0 5.3 2.7	0 0.0 0.0 0.0	49 2.7
MONTANA	26.	16 100.0 9.9 0.9	0 0.0 0.0 0.0	0 0.0 0.0 0.0	16 0.9
NEBRASKA	27.	0 0.0 0.0 0.0	26 100.0 2.8 1.4	0 0.0 0.0 0.0	26 1.4
NEVADA	28.	7 100.0 4.3 0.4	0 0.0 0.0 0.0	0 0.0 0.0 0.0	7 0.4
NEW HAMPSHIRE	29.	23 100.0 14.2 1.3	0 0.0 0.0 0.0	0 0.0 0.0 0.0	23 1.3

(CONTINUED)

Table A.3 (continued)

Crosstabulation of Participating States
and State Population Size
(Small, Medium, Large)

	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
30. NEW JERSEY	0 0.0 0.0 0.0	0 0.0 0.0 0.0	42 100.0 5.8 2.3	42 2.3
31. NEW MEXICO	0 0.0 0.0 0.0	17 100.0 1.9 0.9	0 0.0 0.0 0.0	17 0.9
32. NEW YORK	0 0.0 0.0 0.0	0 0.0 0.0 0.0	105 100.0 14.4 5.8	105 5.8
33. NORTH CAROLINA	0 0.0 0.0 0.0	0 0.0 0.0 0.0	39 100.0 5.3 2.2	39 2.2
34. NORTH DAKOTA	18 100.0 11.1 1.0	0 0.0 0.0 0.0	0 0.0 0.0 0.0	18 1.0
35. OHIO	0 0.0 0.0 0.0	0 0.0 0.0 0.0	81 100.0 11.1 4.5	81 4.5
36. OKLAHOMA	0 0.0 0.0 0.0	94 100.0 10.3 5.2	0 0.0 0.0 0.0	94 5.2
37. OREGON	0 0.0 0.0 0.0	25 100.0 2.7 1.4	0 0.0 0.0 0.0	25 1.4
38. PENNSYLVANIA	0 0.0 0.0 0.0	0 0.0 0.0 0.0	62 100.0 8.5 3.4	62 3.4
39. RHODE ISLAND	12 100.0 7.4 0.7	0 0.0 0.0 0.0	0 0.0 0.0 0.0	12 0.7
40. SOUTH CAROLINA	0 0.0 0.0 0.0	42 100.0 4.6 2.3	0 0.0 0.0 0.0	42 2.3
41. SOUTH DAKOTA	12 100.0 7.4 0.7	0 0.0 0.0 0.0	0 0.0 0.0 0.0	12 0.7
42. TEXAS	0 0.0 0.0 0.0	0 0.0 0.0 0.0	77 100.0 10.6 4.3	77 4.3
43. UTAH	0 0.0 0.0 0.0	17 100.0 1.9 0.9	0 0.0 0.0 0.0	17 0.9
44. VERMONT	11 100.0 6.8 0.6	0 0.0 0.0 0.0	0 0.0 0.0 0.0	11 0.6
45. VIRGINIA	0 0.0 0.0 0.0	33 100.0 3.6 1.8	0 0.0 0.0 0.0	33 1.8
46. WEST VIRGINIA	0 0.0 0.0 0.0	41 100.0 4.5 2.3	0 0.0 0.0 0.0	41 2.3
47. WISCONSIN	0 0.0 0.0 0.0	73 100.0 8.0 4.0	0 0.0 0.0 0.0	73 4.0
48. WYOMING	10 100.0 6.2 0.6	0 0.0 0.0 0.0	0 0.0 0.0 0.0	10 0.6
COLUMN TOTAL	162 9.0	917 50.7	729 40.3	1808 100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.4

Crosstabulation of Full Time Equivalents in Vocational Education and State Population Size (Small, Medium, Large)

FTE	COUNT / ROW PCT / COL PCT / TOT PCT	ST SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
1.0	1.	137	743	572	1452
		9.4	51.2	39.4	88.2
		89.5	88.0	88.0	
		8.3	45.1	34.7	
.75-.99	2.	11	63	42	116
		9.5	54.3	36.2	7.0
		7.2	7.5	6.5	
		0.7	3.8	2.6	
.50-.74	3.	5	38	36	79
		6.3	48.1	45.6	4.8
		3.3	4.5	5.5	
		0.3	2.3	2.2	
	COLUMN TOTAL	153	844	650	1647
		9.3	51.2	39.5	100.0

NUMBER OF MISSING OBSERVATIONS = 172

Table A.5

Crosstabulation of Years Employed in a Vocational Education Position in Present State Agency and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
0-1	YEARS 1.	20	105	79	204
		9.8	51.5	38.7	11.3
		12.3	11.5	10.9	
		1.1	5.8	4.4	
2-4	YEARS 2.	50	195	132	377
		13.3	51.7	35.0	20.9
		30.9	21.3	18.2	
		2.8	10.8	7.3	
5-9	YEARS 3.	43	236	183	462
		9.3	51.1	39.6	25.6
		26.5	25.8	25.2	
		2.4	13.1	10.1	
10-14	YEARS 4.	34	214	202	450
		7.6	47.6	44.9	25.0
		21.0	23.4	27.8	
		1.9	11.9	11.2	
15-19	YEARS 5.	13	98	79	190
		6.8	51.6	41.6	10.5
		8.0	10.7	10.9	
		0.7	5.4	4.4	
20-24	YEARS 6.	2	32	30	64
		3.1	50.0	46.9	3.5
		1.2	3.5	4.1	
		0.1	1.8	1.7	
25-29	YEARS 7.	0	13	9	22
		0.0	59.1	40.9	1.2
		0.0	1.4	1.2	
		0.0	0.7	0.5	
30 PLUS	YEARS 8.	0	22	12	34
		0.0	64.7	35.3	1.9
		0.0	2.4	1.7	
		0.0	1.2	0.7	
	COLUMN TOTAL	162	915	726	1803
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 16

Table A.6

Crosstabulation of Years of Experience in Present Position and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
0-1	YEARS 1.	27	177	144	348
		7.8	50.9	41.4	19.3
		16.7	19.4	19.8	
		1.5	9.8	8.0	
2-4	YEARS 2.	68	309	219	596
		11.4	51.8	36.7	33.1
		42.0	33.9	30.1	
		3.8	17.2	12.2	
5-9	YEARS 3.	43	241	188	472
		9.1	51.1	39.8	26.2
		26.5	26.4	25.9	
		2.4	13.4	10.4	
10-14	YEARS 4.	17	132	124	273
		6.2	48.4	45.4	15.2
		10.5	14.5	17.1	
		0.9	7.3	6.9	
15-17	YEARS 5.	6	40	36	82
		7.3	48.8	43.9	4.6
		3.7	4.4	5.0	
		0.3	2.2	2.0	
20-24	YEARS 6.	1	6	9	16
		6.3	37.5	56.3	0.9
		0.6	0.7	1.2	
		0.1	0.3	0.5	
25-29	YEARS 7.	0	2	6	8
		0.0	25.0	75.0	0.4
		0.0	0.2	0.8	
		0.0	0.1	0.3	
30 PLUS	YEARS 8.	0	5	1	6
		0.0	83.3	16.7	0.3
		0.0	0.5	0.1	
		0.0	0.3	0.1	
	COLUMN TOTAL	162	912	727	1801
		9.0	50.6	40.4	100.0

NUMBER OF MISSING OBSERVATIONS = 18

Table A.7

Crosstabulation of Population of Area in Which Respondent Lived During the Ages of 14-17 and State Population Size (Small, Medium, Large)

	COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.1	MEDIUM 2.1	LARGE 3.1	ROW TOTAL
2,499 OR LESS	1.	49	370	182	601
		8.2	61.6	30.3	33.5
		30.6	40.5	25.2	
		2.7	20.6	10.1	
2,500- 10,000	2.	32	165	112	309
		10.4	53.4	36.2	17.2
		20.0	18.1	15.5	
		1.8	9.2	6.2	
10,001- 25,000	3.	34	115	110	259
		13.1	44.4	42.5	14.4
		21.3	12.6	15.2	
		1.9	6.4	6.1	
25,001- 50,000	4.	14	71	55	140
		10.0	50.7	39.3	7.8
		8.8	7.8	7.6	
		0.8	4.0	3.1	
50,001- 100,000	5.	13	57	92	162
		8.0	35.2	56.8	9.0
		8.1	6.2	12.7	
		0.7	3.2	5.1	
100,001-250,000	6.	12	77	70	159
		7.5	48.4	44.0	8.9
		7.5	8.4	9.7	
		0.7	4.3	3.9	
250,001 OR MORE	7.	6	59	101	166
		3.6	35.5	60.8	9.2
		3.8	6.5	14.0	
		0.3	3.3	5.6	
	COLUMN TOTAL	160	914	722	1796
		8.9	50.9	40.2	100.0

NUMBER OF MISSING OBSERVATIONS = 23

Table A.8

Crosstabulation of Ethnic Background
and State Population Size
(Small, Medium, Large)

		SMALL (1.)	MEDIUM (2.)	LARGE (3.)	ROW TOTAL
AM. IND.OR AK (1.)	COUNT	0	9	9	18
	ROW PCT	0.0	50.0	50.0	1.0
	COL PCT	0.0	1.0	1.2	
	TOT PCT	0.0	0.5	0.5	
HISPANIC (2.)	COUNT	0	11	11	22
	ROW PCT	0.0	50.0	50.0	1.2
	COL PCT	0.0	1.2	1.5	
	TOT PCT	0.0	0.6	0.6	
AS. AM. OR PAC I (3.)	COUNT	5	4	4	13
	ROW PCT	38.5	30.8	30.8	0.7
	COL PCT	3.1	0.4	0.6	
	TOT PCT	0.3	0.2	0.2	
WH--NON HISP ORI (4.)	COUNT	152	840	644	1636
	ROW PCT	9.3	51.3	39.4	90.9
	COL PCT	93.8	92.0	89.0	
	TOT PCT	8.4	46.7	35.8	
BL--NON HISP ORI (5.)	COUNT	5	49	56	110
	ROW PCT	4.5	44.5	50.9	6.1
	COL PCT	3.1	5.4	7.7	
	TOT PCT	0.3	2.7	3.1	
COLUMN TOTAL		162	913	724	1799
		9.0	50.8	40.2	100.0

NUMBER OF MISSING OBSERVATIONS = 20

Table A.9

Crosstabulation of Sex and
State Population Size
(Small, Medium, Large)

		SMALL (1.)	MEDIUM (2.)	LARGE (3.)	ROW TOTAL
FEMALE (1.)	COUNT	44	256	203	503
	ROW PCT	8.7	50.9	40.4	28.0
	COL PCT	27.3	28.1	28.1	
	TOT PCT	2.4	14.3	11.3	
MALE (2.)	COUNT	117	656	520	1293
	ROW PCT	9.0	50.7	40.2	72.0
	COL PCT	72.7	71.9	71.9	
	TOT PCT	6.5	36.5	29.0	
COLUMN TOTAL		161	912	723	1796
		9.0	50.8	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 23

Table A.10

Crosstabulation of Age of Respondent
and State Population Size
(Small, Medium, Large)

	COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
UNDER 31	1.	6	59	35	100
		6.0	59.0	35.0	5.5
		3.7	6.4	4.8	
		0.3	3.3	1.9	
31-35	2.	34	129	104	267
		12.7	48.3	39.0	14.8
		21.1	14.1	14.3	
		1.9	7.2	5.8	
36-40	3.	42	161	107	310
		13.5	51.9	34.5	17.2
		26.1	17.6	14.7	
		2.3	8.9	5.9	
41-45	4.	26	150	90	266
		9.8	56.4	33.8	14.7
		16.1	16.4	12.4	
		1.4	8.3	5.0	
46-50	5.	22	151	139	312
		7.1	48.4	44.6	17.3
		13.7	16.5	19.1	
		1.2	8.4	7.7	
51-55	6.	11	98	119	228
		4.8	43.0	52.2	12.6
		6.8	10.7	16.4	
		0.6	5.4	6.6	
56-60	7.	13	119	84	216
		6.0	55.1	38.9	12.0
		8.1	13.0	11.6	
		0.7	6.6	4.7	
61-65	8.	7	46	43	96
		7.3	47.9	44.8	5.3
		4.3	5.0	5.9	
		0.4	2.5	2.4	
OVER 65	9.	0	4	5	9
		0.0	44.4	55.6	0.5
		0.0	0.4	0.7	
		0.0	0.2	0.3	
	COLUMN TOTAL	161	917	726	1804
		8.9	50.8	40.2	100.0

NUMBER OF MISSING OBSERVATIONS = 15

Table A.11

Crosstabulation of Highest Degree Held and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
HIGH SCHOOL	1.	5	19	24	48
		10.4	39.6	50.0	2.7
		3.1	2.1	3.3	
		0.3	1.1	1.3	
ASSOCIATARTS	2.	0	7	2	9
		0.0	77.8	22.2	0.5
		0.0	0.8	0.3	
		0.0	0.4	0.1	
BACHELOR	3.	25	116	60	201
		12.4	57.7	29.9	11.2
		15.4	12.7	8.3	
		1.4	6.4	3.3	
MASTER	4.	101	588	502	1191
		8.5	49.4	42.1	66.1
		62.3	64.3	69.2	
		5.6	32.6	27.9	
EDUC SPECIALI	5.	6	52	30	88
		6.8	59.1	34.1	4.9
		3.7	5.7	4.1	
		0.3	2.9	1.7	
DOCTORAT	6.	25	132	107	264
		9.5	50.0	40.5	14.7
		15.4	14.4	14.8	
		1.4	7.3	5.9	
COLUMN TOTAL		162	914	725	1801
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 18

Table A.12

Crosstabulation of Major Area of Study for Associate Arts Degree and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
BUSINESS TECH	1.	3	21	25	49
		6.1	42.9	51.0	29.5
		20.0	28.0	32.9	
		1.8	12.7	15.1	
ENGINEERING TECH	2.	5	18	8	31
		16.1	58.1	25.8	18.7
		33.3	24.0	10.5	
		3.0	10.8	4.8	
HEALTH TECH	3.	1	4	9	14
		7.1	28.6	64.3	8.4
		6.7	5.3	11.8	
		0.6	2.4	5.4	
PUBLIC SERV TECH	4.	0	1	1	2
		0.0	50.0	50.0	1.2
		0.0	1.3	1.3	
		0.0	0.6	0.6	
ARTS & SCIENCE	5.	3	11	13	27
		11.1	40.7	48.1	16.3
		20.0	14.7	17.1	
		1.8	6.6	7.8	
OTHER	6.	3	20	20	43
		7.0	46.5	46.5	25.9
		20.0	26.7	26.3	
		1.8	12.0	12.0	
COLUMN TOTAL		15	75	76	166
		9.0	45.2	45.8	100.0

NUMBER OF MISSING OBSERVATIONS = 1653

Table A.13

Crosstabulation of Major Area of Study
For Bachelor's Degree and State
Population Size (Small, Medium, Large)

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.1	MEDIUM 2.1	LARGE 3.1	ROW TOTAL
1. VOCATIONAL ED	2 5.0 1.3 0.1	19 47.5 2.2 1.1	19 47.5 2.7 1.1	40 2.3
2. DISTRIBUTIVE ED	5 12.8 3.3 0.3	23 59.0 2.7 1.3	11 28.2 1.6 0.6	39 2.3
3. HOME ECONOMICS	16 8.3 10.5 0.9	93 48.2 10.7 5.4	84 43.5 11.8 4.9	193 11.2
4. AGRICULTURAL ED	15 6.7 9.9 0.9	136 60.4 15.7 7.9	74 32.9 10.4 4.3	225 13.0
5. BUSINESS&OFFICE	15 9.3 9.9 0.9	85 52.5 9.8 4.9	62 38.3 8.7 3.6	162 9.4
6. HEALTH OCCUP	1 12.5 0.7 0.1	2 25.0 0.2 0.1	5 62.5 0.7 0.3	8 0.5
7. INDUSTRIAL ARTS	17 8.9 11.2 1.0	92 48.4 10.6 5.3	81 42.6 11.4 4.7	190 11.0
8. TRADE & INDUSTRY	9 8.7 5.9 0.5	66 63.5 7.6 3.8	29 27.9 4.1 1.7	104 6.0
9. ADMIN SCIENCE	16 9.1 10.5 0.9	80 45.7 9.2 4.6	79 45.1 11.1 4.6	175 10.1
10. EDUCATION-GEN	12 14.0 7.9 0.7	33 38.4 3.8 1.9	41 47.7 5.8 2.4	86 5.0
11. ELEMENTARY ED	2 5.0 1.3 0.1	19 47.5 2.2 1.1	19 47.5 2.7 1.1	40 2.3
12. SECONDARY ED	5 19.2 3.3 0.3	14 53.8 1.6 0.8	7 26.9 1.0 0.4	26 1.5
14. ADMIN & SUPVTN	0 0.0 0.0 0.0	1 50.0 0.1 0.1	1 50.0 0.1 0.1	2 0.1
16. SPECIAL ED	1 16.7 0.7 0.1	2 33.3 0.2 0.1	3 50.0 0.4 0.2	6 0.3
17. ADULT EDUCATION	0 0.0 0.0 0.0	1 100.0 0.1 0.1	0 0.0 0.0 0.0	1 0.1
18. ARTS & SCIENCES	0 0.0 0.0 0.0	3 42.9 0.3 0.2	4 57.1 0.6 0.2	7 0.4
19. ARTS	0 0.0 0.0 0.0	5 50.0 0.6 0.3	5 50.0 0.7 0.3	10 0.6
20. BIOLOGICAL SCI	0 0.0 0.0 0.0	16 57.1 1.8 0.9	12 42.9 1.7 0.7	28 1.6
21. HUMANITIES	6 6.7 3.9 0.3	36 40.0 4.2 2.1	48 53.3 6.8 2.8	90 5.2
22. SOC & BEHAV SCI	14 13.1 9.2 0.8	46 43.0 5.3 2.7	47 43.9 6.6 2.7	107 6.2
23. MATH,PHY SCI,ENG	5 7.7 3.3 0.3	38 58.5 4.4 2.2	22 33.8 3.1 1.3	65 3.8
24. PROFESSIONALS	4 13.8 2.6 0.2	15 51.7 1.7 0.9	10 34.5 1.4 0.6	29 1.7
25. OTHER	2 6.5 1.3 0.1	15 48.4 1.7 0.9	14 45.2 2.0 0.8	31 1.8
26. NO DEGREE	5 7.9 3.3 0.3	26 41.3 3.0 1.5	32 50.8 4.5 1.9	63 3.6
COLUMN TOTAL	152 8.8	866 50.1	709 41.1	1727 100.0

NUMBER OF MISSING OBSERVATIONS = 92

NO DEGREE = NO DEGREE INCLUDING
NO ASSOCIATE ARTS DEGREE

Table A.14

Crosstabulation of Major Area of Study for Master's Degree and State Population Size (Small, Medium, Large)

ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
1. VOCATIONAL ED	12 9.3 9.0 0.8	57 44.2 7.5 3.8	60 46.5 9.5 3.9	129 8.5
2. DISTRIBUTIVE ED	1 2.2 0.8 0.1	26 56.5 3.4 1.7	19 41.3 3.0 1.3	46 3.0
3. HOME ECONOMICS	12 9.5 9.0 0.8	64 50.8 8.5 4.2	50 39.7 7.9 3.3	126 8.3
4. AGRICULTURAL ED	9 6.0 6.8 0.6	91 61.1 12.0 6.0	49 32.9 7.8 3.2	149 9.8
5. BUSINESS&OFFICE	9 8.3 6.8 0.6	62 56.9 8.2 4.1	38 34.9 6.0 2.5	109 7.2
6. HEALTH OCCUP	0 0.0 0.0 0.0	1 20.0 0.1 0.1	4 80.0 0.6 0.3	5 0.3
7. INDUSTRIAL ARTS	4 5.3 3.0 0.3	36 48.0 4.8 2.4	35 46.7 5.6 2.3	75 4.9
8. TRADE & INDUSTRY	4 4.1 3.0 0.3	64 66.0 8.5 4.2	29 29.9 4.6 1.9	97 6.4
9. ADMIN SCIENCE	5 7.5 3.8 0.3	33 49.3 4.4 2.2	29 43.3 4.6 1.9	67 4.4
10. EDUCATION-GEN	14 9.7 10.5 0.9	52 36.1 6.9 3.4	78 54.2 12.4 5.1	144 9.5
11. ELEMENTARY ED	1 9.1 0.8 0.1	5 45.5 0.7 0.3	5 45.5 0.8 0.3	11 0.7
12. SECONDARY ED	7 14.0 5.3 0.5	26 52.0 3.4 1.7	17 34.0 2.7 1.1	50 3.3
13. GUIDANCE-COUNS	23 16.8 17.3 1.5	67 48.9 8.9 4.4	47 34.3 7.5 3.1	137 9.0
14. ADMIN & SUPVIN	17 7.4 12.8 1.1	110 47.6 14.5 7.2	104 45.0 16.5 6.8	231 15.2

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
15. CURRICULUM	3 16.7 2.3 0.2	6 33.3 0.8 0.4	9 50.0 1.4 0.6	18 1.2
16. SPECIAL ED	3 17.6 2.3 0.2	9 52.9 1.2 0.6	5 29.4 0.8 0.3	17 1.1
17. ADULT EDUCATION	0 0.0 0.0 0.0	13 76.5 1.7 0.9	4 23.5 0.6 0.3	17 1.1
18. ARTS & SCIENCES	0 0.0 0.0 0.0	1 100.0 0.1 0.1	0 0.0 0.0 0.0	1 0.1
19. ARTS	1 50.0 0.8 0.1	0 0.0 0.0 0.0	1 50.0 0.2 0.1	2 0.1
20. BIOLOGICAL SCI	0 0.0 0.0 0.0	3 50.0 0.4 0.2	3 50.0 0.5 0.2	6 0.4
21. HUMANITIES	3 9.1 2.3 0.2	11 33.3 1.5 0.7	19 57.6 3.0 1.3	33 2.2
22. SOC & BEHAV SCI	3 10.0 2.3 0.2	10 33.3 1.3 0.7	17 56.7 2.7 1.1	30 2.0
23. MATH,PHY SCI,ENG	0 0.0 0.0 0.0	6 66.7 0.8 0.4	3 33.3 0.5 0.2	9 0.6
24. PROFESSIONALS	1 20.0 0.8 0.1	3 60.0 0.4 0.2	1 20.0 0.2 0.1	5 0.3
25. OTHER	1 16.7 0.8 0.1	1 16.7 0.1 0.1	4 66.7 0.6 0.3	6 0.4
COLUMN TOTAL	133 8.8	757 49.8	630 41.4	1520 100.0

NUMBER OF MISSING OBSERVATIONS = 299

Table A.15

Crosstabulation of Major Area of Study for Education Specialist Degree and State Population Size (Small, Medium, Large)

	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
VOCATIONAL ED 1.	2 / 11.1 / 12.5 / 1.1	8 / 44.4 / 8.3 / 4.5	8 / 44.4 / 12.3 / 4.5	18 / 10.2
DISTRIBUTIVE ED 2.	0 / 0.0 / 0.0 / 0.0	4 / 100.0 / 4.2 / 2.3	0 / 0.0 / 0.0 / 0.0	4 / 2.3
HOME ECONOMICS 3.	0 / 0.0 / 0.0 / 0.0	3 / 75.0 / 3.1 / 1.7	1 / 25.0 / 1.5 / 0.6	4 / 2.3
AGRICULTURAL ED 4.	0 / 0.0 / 0.0 / 0.0	12 / 80.0 / 12.5 / 6.8	3 / 20.0 / 4.6 / 1.7	15 / 8.5
BUSINESS&OFFICE 5.	0 / 0.0 / 0.0 / 0.0	3 / 42.9 / 3.1 / 1.7	4 / 57.1 / 6.2 / 2.3	7 / 4.0
HEALTH OCCUP 6.	0 / 0.0 / 0.0 / 0.0	0 / 0.0 / 0.0 / 0.0	2 / 100.0 / 3.1 / 1.1	2 / 1.1
INDUSTRIAL ARTS 7.	1 / 100.0 / 6.3 / 0.6	0 / 0.0 / 0.0 / 0.0	0 / 0.0 / 0.0 / 0.0	1 / 0.6
TRADE & INDUSTRY 8.	0 / 0.0 / 0.0 / 0.0	5 / 83.3 / 5.2 / 2.8	1 / 16.7 / 1.5 / 0.6	6 / 3.4
ADMIN SCIENCE 9.	0 / 0.0 / 0.0 / 0.0	1 / 100.0 / 1.0 / 0.6	0 / 0.0 / 0.0 / 0.0	1 / 0.6
EDUCATION-GEN 10.	0 / 0.0 / 0.0 / 0.0	3 / 37.5 / 3.1 / 1.7	5 / 62.5 / 7.7 / 2.8	8 / 4.5
SECONDARY ED 12.	0 / 0.0 / 0.0 / 0.0	1 / 33.3 / 1.0 / 0.6	2 / 66.7 / 3.1 / 1.1	3 / 1.7
GUIDANCE-COUNS 13.	0 / 0.0 / 0.0 / 0.0	8 / 66.7 / 8.3 / 4.5	4 / 33.3 / 6.2 / 2.3	12 / 6.8
ADMIN & SUPVTN 14.	12 / 15.8 / 75.0 / 6.8	42 / 55.3 / 43.8 / 23.7	22 / 28.9 / 33.8 / 12.4	76 / 42.9
CURRICULUM 15.	1 / 12.5 / 6.3 / 0.6	1 / 12.5 / 1.0 / 0.6	6 / 75.0 / 9.2 / 3.4	8 / 4.5
SPECIAL ED 16.	0 / 0.0 / 0.0 / 0.0	1 / 33.3 / 1.0 / 0.6	2 / 66.7 / 3.1 / 1.1	3 / 1.7
ADULT EDUCATION 17.	0 / 0.0 / 0.0 / 0.0	2 / 100.0 / 2.1 / 1.1	0 / 0.0 / 0.0 / 0.0	2 / 1.1
SOC & BEHAV SCI 22.	0 / 0.0 / 0.0 / 0.0	1 / 33.3 / 1.0 / 0.6	2 / 66.7 / 3.1 / 1.1	3 / 1.7
OTHER 25.	0 / 0.0 / 0.0 / 0.0	1 / 25.0 / 1.0 / 0.6	3 / 75.0 / 4.6 / 1.7	4 / 2.3
COLUMN TOTAL	16 / 9.0	96 / 54.2	65 / 36.7	177 / 100.0

NUMBER OF MISSING OBSERVATIONS = 1642

Table A.16

Crosstabulation of Major Area of Study for Doctorate Degree and State Population Size (Small, Medium, Large)

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
1. VOCATIONAL ED	7 / 11.5 / 26.9 / 2.6	33 / 54.1 / 24.3 / 12.1	21 / 34.4 / 18.9 / 7.7	61 / 22.3
2. DISTRIBUTIVE ED	0 / 0.0 / 0.0 / 0.0	0 / 0.0 / 0.0 / 0.0	3 / 100.0 / 2.7 / 1.1	3 / 1.1
3. HOME ECONOMICS	0 / 0.0 / 0.0 / 0.0	1 / 25.0 / 0.7 / 0.4	3 / 75.0 / 2.7 / 1.1	4 / 1.5
4. AGRICULTURAL ED	1 / 9.1 / 3.8 / 0.4	4 / 36.4 / 2.9 / 1.5	6 / 54.5 / 5.4 / 2.2	11 / 4.0
5. BUSINESS&OFFICE	0 / 0.0 / 0.0 / 0.0	3 / 60.0 / 2.2 / 1.1	2 / 40.0 / 1.8 / 0.7	5 / 1.8
7. INDUSTRIAL ARTS	0 / 0.0 / 0.0 / 0.0	1 / 20.0 / 0.7 / 0.4	4 / 80.0 / 3.6 / 1.5	5 / 1.8
8. TRADE & INDUSTRY	0 / 0.0 / 0.0 / 0.0	2 / 33.3 / 1.5 / 0.7	4 / 66.7 / 3.6 / 1.5	6 / 2.2
9. ADMIN SCIENCE	0 / 0.0 / 0.0 / 0.0	1 / 100.0 / 0.7 / 0.4	0 / 0.0 / 0.0 / 0.0	1 / 0.4
10. EDUCATION-GEN	2 / 8.3 / 7.7 / 0.7	14 / 58.3 / 10.3 / 5.1	8 / 33.3 / 7.2 / 2.9	24 / 8.8
11. ELEMENTARY ED	0 / 0.0 / 0.0 / 0.0	1 / 100.0 / 0.7 / 0.4	0 / 0.0 / 0.0 / 0.0	1 / 0.4
12. SECONDARY ED	0 / 0.0 / 0.0 / 0.0	3 / 100.0 / 2.2 / 1.1	0 / 0.0 / 0.0 / 0.0	3 / 1.1
13. GUIDANCE-COUNS	2 / 18.2 / 7.7 / 0.7	5 / 45.5 / 3.7 / 1.8	4 / 36.4 / 3.6 / 1.5	11 / 4.0
14. ADMIN & SUPVTN	12 / 12.4 / 46.2 / 4.4	49 / 50.5 / 36.0 / 17.9	36 / 37.1 / 32.4 / 13.2	97 / 35.5
15. CURRICULUM	1 / 6.3 / 3.8 / 0.4	6 / 37.5 / 4.4 / 2.2	9 / 56.3 / 8.1 / 3.3	16 / 5.9
17. ADULT EDUCATION	1 / 20.0 / 3.8 / 0.4	4 / 80.0 / 2.9 / 1.5	0 / 0.0 / 0.0 / 0.0	5 / 1.8
20. BIOLOGICAL SCI	0 / 0.0 / 0.0 / 0.0	0 / 0.0 / 0.0 / 0.0	1 / 100.0 / 0.9 / 0.4	1 / 0.4
21. HUMANITIES	0 / 0.0 / 0.0 / 0.0	0 / 0.0 / 0.0 / 0.0	1 / 100.0 / 0.9 / 0.4	1 / 0.4
22. SOC & BEHAV SCI	0 / 0.0 / 0.0 / 0.0	3 / 100.0 / 2.2 / 1.1	0 / 0.0 / 0.0 / 0.0	3 / 1.1
23. MATH,PHY SCI,ENG	0 / 0.0 / 0.0 / 0.0	1 / 50.0 / 0.7 / 0.4	1 / 50.0 / 0.9 / 0.4	2 / 0.7
24. PROFESSIONALS	0 / 0.0 / 0.0 / 0.0	4 / 66.7 / 2.9 / 1.5	2 / 33.3 / 1.8 / 0.7	6 / 2.2
25. OTHER	0 / 0.0 / 0.0 / 0.0	1 / 16.7 / 0.7 / 0.4	5 / 83.3 / 4.5 / 1.8	6 / 2.2
COLUMN TOTAL	26 / 9.5	136 / 49.8	111 / 40.7	273 / 100.0

NUMBER OF MISSING OBSERVATIONS = 1546

Table A.17

Crosstabulation of Number of Years Served (Prior to Present Position) as a General Education Secondary Teacher and State Population Size (Small, Medium, Large)

		SMALL (1.)	MEDIUM (2.)	LARGE (3.)	ROW TOTAL
NO	SERVICE (0.)	107	671	533	1311
		8.2	51.2	40.7	72.5
		66.0	73.2	73.1	
		5.9	37.1	29.5	
0-1	YEARS (1.)	8	41	22	71
		11.3	57.7	31.0	3.9
		4.9	4.5	3.0	
		0.4	2.3	1.2	
2-4	YEARS (2.)	23	90	76	189
		12.2	47.6	40.2	10.5
		14.2	9.8	10.4	
		1.3	5.0	4.2	
5-9	YEARS (3.)	21	83	58	162
		13.0	51.2	35.8	9.0
		13.0	9.1	8.0	
		1.2	4.6	3.2	
10-14	YEARS (4.)	2	20	26	48
		4.2	41.7	54.2	2.7
		1.2	2.2	3.6	
		0.1	1.1	1.4	
15-19	YEARS (5.)	1	8	10	19
		5.3	42.1	52.6	1.1
		0.6	0.9	1.4	
		0.1	0.4	0.6	
20 PLUS	YEARS (6.)	0	4	4	8
		0.0	50.0	50.0	0.4
		0.0	0.4	0.5	
		0.0	0.2	0.2	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.18

Crosstabulation of Number of Years Served (Prior to Present Position) as a Vocational Education Secondary Teacher and State Population Size (Small, Medium, Large)

		SMALL (1.)	MEDIUM (2.)	LARGE (3.)	ROW TOTAL
NO	SERVICE (0.)	79	381	316	776
		10.2	49.1	40.7	42.9
		48.8	41.5	43.3	
		4.4	21.1	17.5	
0-1	YEARS (1.)	5	22	13	40
		12.5	55.0	32.5	2.2
		3.1	2.4	1.8	
		0.3	1.2	0.7	
2-4	YEARS (2.)	26	134	122	282
		9.2	47.5	43.3	15.6
		16.0	14.6	16.7	
		1.4	7.4	6.7	
5-9	YEARS (3.)	29	214	163	406
		7.1	52.7	40.1	22.5
		17.9	23.3	22.4	
		1.6	11.8	9.0	
10-14	YEARS (4.)	17	84	66	167
		10.2	50.3	39.5	9.2
		10.5	9.2	9.1	
		0.9	4.6	3.7	
15-19	YEARS (5.)	4	49	36	89
		4.5	55.1	40.4	4.9
		2.5	5.3	4.9	
		0.2	2.7	2.0	
20 PLUS	YEARS (6.)	2	33	13	48
		4.2	68.8	27.1	2.7
		1.2	3.6	1.8	
		0.1	1.8	0.7	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.19

Crosstabulation of Number of Years Served (Prior to Present Position) as a Vocational Education Postsecondary Instructor and State Population Size (Small, Medium, Large)

		COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE	0.	130 8.5 80.2 7.2	776 50.5 84.6 42.9	630 41.0 86.4 34.8	1536 85.0
0-1	YEARS	1.	7 11.7 4.3 0.4	26 43.3 2.8 1.4	27 45.0 3.7 1.5	60 3.3
2-4	YEARS	2.	13 10.8 8.0 0.7	65 54.2 7.1 3.6	42 35.0 5.8 2.3	120 6.6
5-9	YEARS	3.	11 15.5 6.8 0.6	37 52.1 4.0 2.0	23 32.4 3.2 1.3	71 3.9
10-14	YEARS	4.	1 7.7 0.6 0.1	9 69.2 1.0 0.5	3 23.1 0.4 0.2	13 0.7
15-19	YEARS	5.	0 0.0 0.0 0.0	3 50.0 0.3 0.2	3 50.0 0.4 0.2	6 0.3
20 PLUS	YEARS	6.	0 0.0 0.0 0.0	1 50.0 0.1 0.1	1 50.0 0.1 0.1	2 0.1
		COLUMN TOTAL	162 9.0	917 50.7	729 40.3	1808 100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.20

Crosstabulation of Number of Years Served (Prior to Present Position) as a General Education Postsecondary Instructor and State Population Size (Small, Medium, Large)

		COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE	0.	154 8.8 95.1 8.5	894 50.9 97.5 49.4	707 40.3 97.0 39.1	1755 97.1
0-1	YEARS	1.	5 22.7 3.1 0.3	8 36.4 0.9 0.4	9 40.9 1.2 0.5	22 1.2
2-4	YEARS	2.	1 5.0 0.6 0.1	10 50.0 1.1 0.6	9 45.0 1.2 0.5	20 1.1
5-9	YEARS	3.	1 11.1 0.6 0.1	5 55.6 0.5 0.3	3 33.3 0.4 0.2	9 0.5
10-14	YEARS	4.	1 100.0 0.6 0.1	0 0.0 0.0 0.0	0 0.0 0.0 0.0	1 0.1
15-19	YEARS	5.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	1 100.0 0.1 0.1	1 0.1
20 PLUS	YEARS	6.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	0 0.0 0.0 0.0	0 0.0
		COLUMN TOTAL	162 9.0	917 50.7	729 40.3	1808 100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.21

Crosstabulation of Number of Years Served (Prior to Present Position) as a College Professor and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	142	803	639	1584
		9.0	50.7	40.3	87.6
		87.7	87.6	87.7	
		7.9	44.4	35.3	
0-1 YEARS	1.	4	27	27	58
		6.9	46.6	46.6	3.2
		2.5	2.9	3.7	
		0.2	1.5	1.5	
2-4 YEARS	2.	10	61	33	104
		9.6	58.7	31.7	5.8
		6.2	6.7	4.5	
		0.6	3.4	1.8	
5-9 YEARS	3.	4	24	25	53
		7.5	45.3	47.2	2.9
		2.5	2.6	3.4	
		0.2	1.3	1.4	
10-14 YEARS	4.	2	0	4	6
		33.3	0.0	66.7	0.3
		1.2	0.0	0.5	
		0.1	0.0	0.2	
15-19 YEARS	5.	0	1	1	2
		0.0	50.0	50.0	0.1
		0.0	0.1	0.1	
		0.0	0.1	0.1	
20 PLUS YEARS	6.	0	1	0	1
		0.0	100.0	0.0	0.1
		0.0	0.1	0.0	
		0.0	0.1	0.0	
COLUMN TOTAL		162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.22

Crosstabulation of Number of Years Served (Prior to Present Position) as a State Education Agency Administrator and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	103	618	486	1207
		8.5	51.2	40.3	66.8
		63.6	67.4	66.7	
		5.7	34.2	26.9	
0-1 YEARS	1.	4	17	10	31
		12.9	54.8	32.3	1.7
		2.5	1.9	1.4	
		0.2	0.9	0.6	
2-4 YEARS	2.	18	71	47	136
		13.2	52.2	34.6	7.5
		11.1	7.7	6.4	
		1.0	3.9	2.6	
5-9 YEARS	3.	22	99	82	203
		10.8	48.8	40.4	11.2
		13.6	10.8	11.2	
		1.2	5.5	4.5	
10-14 YEARS	4.	10	66	69	145
		6.9	45.5	47.6	8.0
		6.2	7.2	9.5	
		0.6	3.7	3.8	
15-19 YEARS	5.	3	29	23	55
		5.5	52.7	41.8	3.0
		1.9	3.2	3.2	
		0.2	1.6	1.3	
20 PLUS YEARS	6.	2	17	12	31
		6.5	54.8	38.7	1.7
		1.2	1.9	1.6	
		0.1	0.9	0.7	
COLUMN TOTAL		162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.23

Crosstabulation of Number of Years Served (Prior to Present Position) as an Elementary/Secondary School Administrator and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	150	849	670	1669
		9.0	50.9	40.1	92.3
		92.6	92.6	91.9	
		8.3	47.0	37.1	
0-1 YEARS	1.	1	17	11	29
		3.4	58.6	37.9	1.6
		0.6	1.9	1.5	
		0.1	0.9	0.6	
2-4 YEARS	2.	6	23	32	61
		9.8	37.7	52.5	3.4
		3.7	2.5	4.4	
		0.3	1.3	1.8	
5-9 YEARS	3.	3	18	9	30
		10.0	60.0	30.0	1.7
		1.9	2.0	1.2	
		0.2	1.0	0.5	
10-14 YEARS	4.	2	5	5	12
		16.7	41.7	41.7	0.7
		1.2	0.5	0.7	
		0.1	0.3	0.3	
15-19 YEARS	5.	0	4	2	6
		0.0	66.7	33.3	0.3
		0.0	0.4	0.3	
		0.0	0.2	0.1	
20 PLUS YEARS	6.	0	1	0	1
		0.0	100.0	0.0	0.1
		0.0	0.1	0.0	
		0.0	0.1	0.0	
COLUMN TOTAL		162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.24

Crosstabulation of Number of Years Served (Prior to Present Position) as a Secondary School Administrator in Vocational Education and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	147	836	666	1649
		8.9	50.7	40.4	91.2
		90.7	91.2	91.4	
		8.1	46.2	36.8	
0-1 YEARS	1.	1	13	15	29
		3.4	44.8	51.7	1.6
		0.6	1.4	2.1	
		0.1	0.7	0.8	
2-4 YEARS	2.	8	39	26	73
		11.0	53.4	35.6	4.0
		4.9	4.3	3.6	
		0.4	2.2	1.4	
5-9 YEARS	3.	6	22	19	47
		12.8	46.8	40.4	2.6
		3.7	2.4	2.6	
		0.3	1.2	1.1	
10-14 YEARS	4.	0	7	2	9
		0.0	77.8	22.2	0.5
		0.0	0.8	0.3	
		0.0	0.4	0.1	
15-19 YEARS	5.	0	0	1	1
		0.0	0.0	100.0	0.1
		0.0	0.0	0.1	
		0.0	0.0	0.1	
20 PLUS YEARS	6.	0	0	0	0
		0.0	0.0	0.0	0.0
		0.0	0.0	0.0	
		0.0	0.0	0.0	
COLUMN TOTAL		162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.25

Crosstabulation of Number of Years Served (Prior to Present Position) as an Administrator in a 2-year Postsecondary Institution and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	149	866	693	1708
		8.7	50.7	40.6	94.5
		92.0	94.4	95.1	
		8.2	47.9	38.3	
0-1 YEARS	1.	4	7	7	18
		22.2	38.9	38.9	1.0
		2.5	0.8	1.0	
		0.2	0.4	0.4	
2-4 YEARS	2.	5	27	16	48
		10.4	56.3	33.3	2.7
		3.1	2.9	2.2	
		0.3	1.5	0.9	
5-9 YEARS	3.	2	13	9	24
		8.3	54.2	37.5	1.3
		1.2	1.4	1.2	
		0.1	0.7	0.5	
10-14 YEARS	4.	2	3	2	7
		28.6	42.9	28.6	0.4
		1.2	0.3	0.3	
		0.1	0.2	0.1	
15-19 YEARS	5.	0	0	2	2
		0.0	0.0	100.0	0.1
		0.0	0.0	0.3	
		0.0	0.0	0.1	
20 PLUS YEARS	6.	0	1	0	1
		0.0	100.0	0.0	0.1
		0.0	0.1	0.0	
		0.0	0.1	0.0	
COLUMN TOTAL		162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.26

Crosstabulation of Number of Years Served (Prior to Present Position) as an Administrator in a 4-year College/University and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	156	900	713	1769
		8.8	50.9	40.3	97.8
		96.3	98.1	97.8	
		8.6	49.8	39.4	
0-1 YEARS	1.	1	5	4	10
		10.0	50.0	40.0	0.6
		0.6	0.5	0.5	
		0.1	0.3	0.2	
2-4 YEARS	2.	4	7	9	20
		20.0	35.0	45.0	1.1
		2.5	0.8	1.2	
		0.2	0.4	0.5	
5-9 YEARS	3.	1	4	3	8
		12.5	50.0	37.5	0.4
		0.6	0.4	0.4	
		0.1	0.2	0.2	
10-14 YEARS	4.	0	1	0	1
		0.0	100.0	0.0	0.1
		0.0	0.1	0.0	
		0.0	0.1	0.0	
15-19 YEARS	5.	0	0	0	0
		0.0	0.0	0.0	0.0
		0.0	0.0	0.0	
		0.0	0.0	0.0	
20 PLUS YEARS	6.	0	0	0	0
		0.0	0.0	0.0	0.0
		0.0	0.0	0.0	
		0.0	0.0	0.0	
COLUMN TOTAL		162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.27

Crosstabulation of Number of Years Served
(Prior to Present Position) as an
Employee in Business/Industry and
State Population Size
(Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	104	570	466	1140
		9.1	50.0	40.9	63.1
		64.2	62.2	63.9	
		5.8	31.5	25.8	
0-1 YEARS	1.	7	29	25	61
		11.5	47.5	41.0	3.4
		4.3	3.2	3.4	
		0.4	1.6	1.4	
2-4 YEARS	2.	22	139	92	253
		8.7	54.9	36.4	14.0
		13.6	15.2	12.6	
		1.2	7.7	5.1	
5-9 YEARS	3.	19	90	66	175
		10.9	51.4	37.7	9.7
		11.7	9.8	9.1	
		1.1	5.0	3.7	
10-14 YEARS	4.	6	50	45	101
		5.9	49.5	44.6	5.6
		3.7	5.5	6.2	
		0.3	2.8	2.5	
15-19 YEARS	5.	4	24	20	48
		8.3	50.0	41.7	2.7
		2.5	2.6	2.7	
		0.2	1.3	1.1	
20 PLUS YEARS	6.	0	15	15	30
		0.0	50.0	50.0	1.7
		0.0	1.6	2.1	
		0.0	0.8	0.8	
COLUMN TOTAL		162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.28

Crosstabulation of Number of Years Served
(Prior to Present Position) as an
Employee in a Federal Agency and
State Population Size
(Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	146	841	669	1656
		8.8	50.8	40.4	91.6
		90.1	91.7	91.8	
		8.1	46.5	37.0	
0-1 YEARS	1.	1	18	8	27
		3.7	66.7	29.6	1.5
		0.6	2.0	1.1	
		0.1	1.0	0.4	
2-4 YEARS	2.	8	30	28	66
		12.1	45.5	42.4	3.7
		4.9	3.3	3.8	
		0.4	1.7	1.5	
5-9 YEARS	3.	4	15	9	28
		14.3	53.6	32.1	1.5
		2.5	1.6	1.2	
		0.2	0.8	0.5	
10-14 YEARS	4.	2	4	7	13
		15.4	30.8	53.8	0.7
		1.2	0.4	1.0	
		0.1	0.2	0.4	
15-19 YEARS	5.	0	1	1	2
		0.0	50.0	50.0	0.1
		0.0	0.1	0.1	
		0.0	0.1	0.1	
20 PLUS YEARS	6.	1	8	7	16
		6.3	50.0	43.8	0.9
		0.6	0.9	1.0	
		0.1	0.4	0.4	
COLUMN TOTAL		162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.29

Crosstabulation of Number of Years Served (Prior to Present Position) in some Other Capacity and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	106	630	481	1217
		8.7	51.8	39.5	67.3
		65.4	68.7	66.0	
		5.9	34.8	26.6	
0-1	YEARS 1.	5	26	18	49
		10.2	53.1	36.7	2.7
		3.1	2.8	2.5	
		0.3	1.4	1.0	
2-4	YEARS 2.	29	121	98	248
		11.7	48.8	39.5	13.7
		17.9	13.2	13.4	
		1.6	6.7	5.4	
5-9	YEARS 3.	15	89	71	175
		8.6	50.9	40.6	9.7
		9.3	9.7	9.7	
		0.8	4.9	3.9	
10-14	YEARS 4.	3	28	27	58
		5.2	48.3	46.6	3.2
		1.9	3.1	3.7	
		0.2	1.5	1.5	
15-19	YEARS 5.	0	12	14	26
		0.0	46.2	53.8	1.4
		0.0	1.3	1.9	
		0.0	0.7	0.8	
20 PLUS	YEARS 6.	4	11	20	35
		11.4	31.4	57.1	1.9
		2.5	1.2	2.7	
		0.2	0.6	1.1	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.30

Crosstabulation of Prior Position Held Immediately Before Assuming Vocational Responsibility in Present State Agency and State Population Size (Small, Medium, Large)

PRIOR POSITION	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
1. TEACHER	74 8.4 46.5 4.3	458 52.2 52.5 26.6	346 39.4 50.4 20.1	878 51.1
2. SUPERINTENDENT	2 7.4 1.3 0.1	13 48.1 1.5 0.8	12 44.4 1.7 0.7	27 1.6
3. PRINCIPAL	5 11.6 3.1 0.3	20 46.5 2.3 1.2	18 41.9 2.6 1.0	43 2.5
4. LOCAL VOC SUPVSR	6 5.9 3.8 0.3	47 46.1 5.4 2.7	49 48.0 7.1 2.9	102 5.9
5. LOCAL VOC DIR	9 10.6 5.7 0.5	49 57.6 5.6 2.9	27 31.8 3.9 1.6	85 4.9
6. CURRIC SPECIALST	2 18.2 1.3 0.1	8 72.7 0.9 0.5	1 9.1 0.1 0.1	11 0.6
7. PER TRAIN SPEC	2 13.3 1.3 0.1	9 60.0 1.0 0.5	4 26.7 0.6 0.2	15 0.9
8. GUID-COUNS SPEC	6 14.0 3.8 0.3	27 62.8 3.1 1.6	10 23.3 1.5 0.6	43 2.5
9. GEN ED ADMIN	2 15.4 1.3 0.1	6 46.2 0.7 0.3	5 38.5 0.7 0.3	13 0.8
10. BUS|IND EMPEE	10 8.6 6.3 0.6	58 50.0 6.6 3.4	48 41.4 7.0 2.8	116 6.7
11. FED AGNCY EMPEE	3 11.1 1.9 0.2	14 51.9 1.6 0.8	10 37.0 1.5 0.6	27 1.6
12. ST AGNCY EMPEE	28 15.6 17.6 1.6	83 46.4 9.5 4.8	68 38.0 9.9 4.0	179 10.4
13. OTHER	10 5.6 6.3 0.6	81 45.0 9.3 4.7	89 49.4 13.0 5.2	180 10.5
COLUMN TOTAL	159 9.2	873 50.8	687 40.0	1719 100.0

NUMBER OF MISSING OBSERVATIONS = 100

(CONTINUED)

Table A.31

Crosstabulation of Institutional Level of the Prior Position Held Immediately Before Assuming Vocational Responsibility in Present State Agency and State Population Size (Small, Medium, Large)

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.1	MEDIUM 2.1	LARGE 3.1	ROW TOTAL
1. ELEMENTARY	2	9	15	26
	7.7	34.6	57.7	1.5
	1.3	1.1	2.2	
	0.1	0.5	0.9	
2. SECONDARY	76	477	361	914
	8.3	52.2	39.5	54.0
	49.0	55.8	52.9	
	4.5	28.2	21.3	
3. 2-YR COLLEGE	22	90	70	182
	12.1	49.5	38.5	10.8
	14.2	10.5	10.3	
	1.3	5.3	4.1	
4. 4-YR COLLEGE	10	80	58	148
	6.8	54.1	39.2	8.7
	6.5	9.4	8.5	
	0.6	4.7	3.4	
5. STATE LEVEL	26	85	68	179
	14.5	47.5	38.0	10.6
	16.8	9.9	10.0	
	1.5	5.0	4.0	
6. FEDERAL LEVEL	2	12	10	24
	8.3	50.0	41.7	1.4
	1.3	1.4	1.5	
	0.1	0.7	0.6	
7. BUS|IND|LABOR	10	54	46	110
	9.1	49.1	41.8	6.5
	6.5	6.3	6.7	
	0.6	3.2	2.7	
8. OTHER	7	48	54	109
	6.4	44.0	49.5	6.4
	4.5	5.6	7.9	
	0.4	2.8	3.2	
COLUMN TOTAL	155	855	682	1692
	9.2	50.5	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 127

Table A.32

Crosstabulation of Years of Job Experience With Economic Development as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.		153	833	654	1640
			9.3	50.8	39.9	90.7
			94.4	90.8	89.7	
			8.5	46.1	36.2	
0-1	YEARS 1.		3	12	14	29
			10.3	41.4	48.3	1.6
			1.9	1.3	1.9	
			0.2	0.7	0.8	
2-4	YEARS 2.		3	27	32	62
			4.8	43.5	51.6	3.4
			1.9	2.9	4.4	
			0.2	1.5	1.8	
5-9	YEARS 3.		3	12	12	27
			11.1	44.4	44.4	1.5
			1.9	1.3	1.6	
			0.2	0.7	0.7	
10-14	YEARS 4.		0	12	5	17
			0.0	70.6	29.4	0.9
			0.0	1.3	0.7	
			0.0	0.7	0.3	
15 PLUS	YEARS 5.		0	12	8	20
			0.0	60.0	40.0	1.1
			0.0	1.3	1.1	
			0.0	0.7	0.4	
YEARS	UNKNOWN 6.		0	9	4	13
			0.0	69.2	30.8	0.7
			0.0	1.0	0.5	
			0.0	0.5	0.2	
	COLUMN TOTAL		162	917	729	1808
			9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.33

Crosstabulation of Years of Job Experience With Disadvantaged Populations as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.		106	632	471	1209
			8.8	52.3	39.0	66.9
			65.4	68.9	64.6	
			5.9	35.0	26.1	
0-1	YEARS 1.		6	23	18	47
			12.8	48.9	38.3	2.6
			3.7	2.5	2.5	
			0.3	1.3	1.0	
2-4	YEARS 2.		20	90	71	181
			11.0	49.7	39.2	10.0
			12.3	9.8	9.7	
			1.1	5.0	3.9	
5-9	YEARS 3.		17	78	74	169
			10.1	46.2	43.8	9.3
			10.5	8.5	10.2	
			0.9	4.3	4.1	
10-14	YEARS 4.		7	48	55	110
			6.4	43.6	50.0	6.1
			4.3	5.2	7.5	
			0.4	2.7	3.0	
15 PLUS	YEARS 5.		4	31	26	61
			6.6	50.8	42.6	3.4
			2.5	3.4	3.6	
			0.2	1.7	1.4	
YEARS	UNKNOWN 6.		2	15	14	31
			6.5	48.4	45.2	1.7
			1.2	1.6	1.9	
			0.1	0.8	0.8	
	COLUMN TOTAL		162	917	729	1808
			9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.34

Crosstabulation of Years of Job Experience With Limited English-Speaking Populations as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	145	845	648	1638
		8.9	51.6	39.6	90.6
		89.5	92.1	88.9	
		8.0	46.7	35.8	
0-1	YEARS 1.	2	11	16	29
		6.9	37.9	55.2	1.6
		1.2	1.2	2.2	
		0.1	0.6	0.9	
2-4	YEARS 2.	8	29	22	59
		13.6	49.2	37.3	3.3
		4.9	3.2	3.0	
		0.4	1.6	1.2	
5-9	YEARS 3.	4	16	18	38
		10.5	42.1	47.4	2.1
		2.5	1.7	2.5	
		0.2	0.9	1.0	
10-14	YEARS 4.	1	8	13	22
		4.5	36.4	59.1	1.2
		0.6	0.9	1.8	
		0.1	0.4	0.7	
15 PLUS	YEARS 5.	0	2	5	7
		0.0	28.6	71.4	0.4
		0.0	0.2	0.7	
		0.0	0.1	0.3	
YEARS	UNKNOWN 6.	2	6	7	15
		13.3	40.0	46.7	0.8
		1.2	0.7	1.0	
		0.1	0.3	0.4	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.35

Crosstabulation of Years of Job Experience With Handicapped Populations as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	130	763	580	1473
		8.8	51.8	39.4	81.5
		80.2	83.2	79.6	
		7.2	42.2	32.1	
0-1	YEARS 1.	4	23	18	45
		8.9	51.1	40.0	2.5
		2.5	2.5	2.5	
		0.2	1.3	1.0	
2-4	YEARS 2.	13	44	53	110
		11.8	40.0	48.2	6.1
		8.0	4.8	7.3	
		0.7	2.4	2.9	
5-9	YEARS 3.	10	38	37	85
		11.8	44.7	43.5	4.7
		6.2	4.1	5.1	
		0.6	2.1	2.0	
10-14	YEARS 4.	3	24	20	47
		6.4	51.1	42.6	2.6
		1.9	2.6	2.7	
		0.2	1.3	1.1	
15 PLUS	YEARS 5.	0	13	8	21
		0.0	61.9	38.1	1.2
		0.0	1.4	1.1	
		0.0	0.7	0.4	
YEARS	UNKNOWN 6.	2	12	13	27
		7.4	44.4	48.1	1.5
		1.2	1.3	1.8	
		0.1	0.7	0.7	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.36

Crosstabulation of Years of Job Experience With Information Systems as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	124	752	585	1461
		8.5	51.5	40.0	80.8
		76.5	82.0	80.2	
		6.9	41.6	32.4	
0-1	YEARS 1.	3	25	17	45
		6.7	55.6	37.8	2.5
		1.9	2.7	2.3	
		0.2	1.4	0.9	
2-4	YEARS 2.	21	60	65	146
		14.4	41.1	44.5	8.1
		13.0	6.5	8.9	
		1.2	3.3	3.6	
5-9	YEARS 3.	9	39	22	70
		12.9	55.7	31.4	3.9
		5.6	4.3	3.0	
		0.5	2.2	1.2	
10-14	YEARS 4.	3	16	14	33
		9.1	48.5	42.4	1.8
		1.9	1.7	1.9	
		0.2	0.9	0.8	
15 PLUS	YEARS 5.	1	9	12	22
		4.5	40.9	54.5	1.2
		0.6	1.0	1.6	
		0.1	0.5	0.7	
YEARS	UNKNOWN 6.	1	16	14	31
		3.2	51.6	45.2	1.7
		0.6	1.7	1.9	
		0.1	0.9	0.8	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.37

Crosstabulation of Years of Job Experience With Planning as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	92	534	418	1044
		8.8	51.1	40.0	57.7
		56.8	58.2	57.3	
		5.1	29.5	23.1	
0-1	YEARS 1.	3	36	30	69
		4.3	52.2	43.5	3.8
		1.9	3.9	4.1	
		0.2	2.0	1.7	
2-4	YEARS 2.	24	89	91	204
		11.8	43.6	44.6	11.3
		14.8	9.7	12.5	
		1.3	4.9	5.0	
5-9	YEARS 3.	22	101	78	201
		10.9	50.2	38.8	11.1
		13.6	11.0	10.7	
		1.2	5.6	4.3	
10-14	YEARS 4.	10	68	44	122
		8.2	55.7	36.1	6.7
		6.2	7.4	6.0	
		0.6	3.8	2.4	
15 PLUS	YEARS 5.	7	50	38	95
		7.4	52.6	40.0	5.3
		4.3	5.5	5.2	
		0.4	2.8	2.1	
YEARS	UNKNOWN 6.	4	39	30	73
		5.5	53.4	41.1	4.0
		2.5	4.3	4.1	
		0.2	2.2	1.7	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.40

Crosstabulation of Years of Job Experience With Guidance and Counseling as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	124	741	605	1470
		8.4	50.4	41.2	81.3
		76.5	80.8	83.0	
		6.9	41.0	33.5	
0-1	YEARS 1.	4	14	15	33
		12.1	42.4	45.5	1.8
		2.5	1.5	2.1	
		0.2	0.8	0.8	
2-4	YEARS 2.	18	60	40	118
		15.3	50.8	33.9	6.5
		11.1	6.5	5.5	
		1.0	3.3	2.2	
5-9	YEARS 3.	9	46	31	86
		10.5	53.5	36.0	4.8
		5.6	5.0	4.3	
		0.5	2.5	1.7	
10-14	YEARS 4.	5	20	14	39
		12.8	51.3	35.9	2.2
		3.1	2.2	1.9	
		0.3	1.1	0.8	
15 PLUS	YEARS 5.	0	24	14	38
		0.0	63.2	36.8	2.1
		0.0	2.6	1.9	
		0.0	1.3	0.8	
YEARS	UNKNOWN 6.	2	12	10	24
		8.3	50.0	41.7	1.3
		1.2	1.3	1.4	
		0.1	0.7	0.6	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.41

Crosstabulation of Years of Job Experience With Program Evaluation as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	89	503	391	983
		9.1	51.2	39.8	54.4
		54.9	54.9	53.6	
		4.9	27.8	21.6	
0-1	YEARS 1.	7	31	35	73
		9.6	42.5	47.9	4.0
		4.3	3.4	4.8	
		0.4	1.7	1.9	
2-4	YEARS 2.	28	138	110	276
		10.1	50.0	39.9	15.3
		17.3	15.0	15.1	
		1.5	7.6	6.1	
5-9	YEARS 3.	19	105	86	210
		9.0	50.0	41.0	11.6
		11.7	11.5	11.8	
		1.1	5.8	4.8	
10-14	YEARS 4.	11	59	55	125
		8.8	47.2	44.0	6.9
		6.8	6.4	7.5	
		0.6	3.3	3.0	
15 PLUS	YEARS 5.	4	41	29	74
		5.4	55.4	39.2	4.1
		2.5	4.5	4.0	
		0.2	2.3	1.6	
YEARS	UNKNOWN 6.	4	40	23	67
		6.0	59.7	34.3	3.7
		2.5	4.4	3.2	
		0.2	2.2	1.3	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.38

Crosstabulation of Years of Job Experience With Administration as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	54	365	298	717
		7.5	50.9	41.6	39.7
		33.3	39.8	40.9	
		3.0	20.2	16.5	
0-1	YEARS 1.	3	33	22	58
		5.2	56.9	37.9	3.2
		1.9	3.6	3.0	
		0.2	1.8	1.2	
2-4	YEARS 2.	31	133	92	256
		12.1	52.0	35.9	14.2
		19.1	14.5	12.6	
		1.7	7.4	5.1	
5-9	YEARS 3.	33	160	125	318
		10.4	50.3	39.3	17.6
		20.4	17.4	17.1	
		1.8	8.8	6.9	
10-14	YEARS 4.	24	110	96	230
		10.4	47.8	41.7	12.7
		14.8	12.0	13.2	
		1.3	6.1	5.3	
15 PLUS	YEARS 5.	13	86	71	170
		7.6	50.6	41.8	9.4
		8.0	9.4	9.7	
		0.7	4.8	3.9	
YEARS	UNKNOWN 6.	4	30	25	59
		6.8	50.8	42.4	3.3
		2.5	3.3	3.4	
		0.2	1.7	1.4	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.39

Crosstabulation of Years of Job Experience With Research and Development as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	125	711	581	1417
		8.8	50.2	41.0	78.4
		77.2	77.5	79.7	
		6.9	39.3	32.1	
0-1	YEARS 1.	4	36	13	53
		7.5	67.9	24.5	2.9
		2.5	3.9	1.8	
		0.2	2.0	0.7	
2-4	YEARS 2.	15	81	68	164
		9.1	49.4	41.5	9.1
		9.3	8.8	9.3	
		0.8	4.5	3.8	
5-9	YEARS 3.	12	46	29	87
		13.8	52.9	33.3	4.8
		7.4	5.0	4.0	
		0.7	2.5	1.6	
10-14	YEARS 4.	2	13	13	28
		7.1	46.4	46.4	1.5
		1.2	1.4	1.8	
		0.1	0.7	0.7	
15 PLUS	YEARS 5.	1	12	14	27
		3.7	44.4	51.9	1.5
		0.6	1.3	1.9	
		0.1	0.7	0.8	
YEARS	UNKNOWN 6.	3	18	11	32
		9.4	56.3	34.4	1.8
		1.9	2.0	1.5	
		0.2	1.0	0.6	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.42

Crosstabulation of Years of Job Experience With Personnel Training as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	110	657	531	1298
		8.5	50.6	40.9	71.8
		67.9	71.6	72.8	
		6.1	36.3	29.4	
0-1	YEARS 1.	5	23	15	43
		11.6	53.5	34.9	2.4
		3.1	2.5	2.1	
		0.3	1.3	0.8	
2-4	YEARS 2.	25	92	69	186
		13.4	49.5	37.1	10.3
		15.4	10.0	9.5	
		1.4	5.1	3.8	
5-9	YEARS 3.	13	64	52	129
		10.1	49.6	40.3	7.1
		8.0	7.0	7.1	
		0.7	3.5	2.9	
10-14	YEARS 4.	7	38	31	76
		9.2	50.0	40.8	4.2
		4.3	4.1	4.3	
		0.4	2.1	1.7	
15 PLUS	YEARS 5.	0	25	20	45
		0.0	55.6	44.4	2.5
		0.0	2.7	2.7	
		0.0	1.4	1.1	
YEARS	UNKNOWN 6.	2	18	11	31
		6.5	58.1	35.5	1.7
		1.2	2.0	1.5	
		0.1	1.0	0.6	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.43

Crosstabulation of Years of Job Experience With Sex Equity as Major Area of Responsibility and State Population Size (Small, Medium, Large)

		SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO	SERVICE 0.	143	823	633	1599
		8.9	51.5	39.6	88.4
		88.3	89.7	86.8	
		7.9	45.5	35.0	
0-1	YEARS 1.	5	20	23	48
		10.4	41.7	47.9	2.7
		3.1	2.2	3.2	
		0.3	1.1	1.3	
2-4	YEARS 2.	11	49	39	99
		11.1	49.5	39.4	5.5
		6.8	5.3	5.3	
		0.6	2.7	2.2	
5-9	YEARS 3.	3	8	15	26
		11.5	30.8	57.7	1.4
		1.9	0.9	2.1	
		0.2	0.4	0.8	
10-14	YEARS 4.	0	4	5	9
		0.0	44.4	55.6	0.5
		0.0	0.4	0.7	
		0.0	0.2	0.3	
15 PLUS	YEARS 5.	0	3	1	4
		0.0	75.0	25.0	0.2
		0.0	0.3	0.1	
		0.0	0.2	0.1	
YEARS	UNKNOWN 6.	0	10	13	23
		0.0	43.5	56.5	1.3
		0.0	1.1	1.8	
		0.0	0.6	0.7	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.44

Crosstabulation of Years of Job Experience With Basic Skills (3 Rs) Instructional Techniques as Major Areas of Responsibility and State Population Size (Small, Medium, Large)

	COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
NO SERVICE	0.	134	764	618	1516
		8.8	50.4	40.8	83.8
		82.7	83.3	84.8	
		7.4	42.3	34.2	
0-1 YEARS	1.	4	6	8	18
		22.2	33.3	44.4	1.0
		2.5	0.7	1.1	
		0.2	0.3	0.4	
2-4 YEARS	2.	9	39	28	76
		11.8	51.3	36.8	4.2
		5.6	4.3	3.8	
		0.5	2.2	1.5	
5-9 YEARS	3.	9	46	29	84
		10.7	54.8	34.5	4.6
		5.6	5.0	4.0	
		0.5	2.5	1.6	
10-14 YEARS	4.	3	25	20	48
		6.3	52.1	41.7	2.7
		1.9	2.7	2.7	
		0.2	1.4	1.1	
15 PLUS YEARS	5.	3	23	18	44
		6.8	52.3	40.9	2.4
		1.9	2.5	2.5	
		0.2	1.3	1.0	
YEARS UNKNOWN	6.	0	14	8	22
		0.0	63.6	36.4	1.2
		0.0	1.5	1.1	
		0.0	0.8	0.4	
	COLUMN TOTAL	162	917	729	1808
		9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.45

Crosstabulation of Background in Economic Development, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	109	551	454	1114
	9.8	49.5	40.8	61.6
	67.3	60.1	62.3	
	6.0	30.5	25.1	
MODERATE BKGND 2.	40	309	224	573
	7.0	53.9	39.1	31.7
	24.7	33.7	30.7	
	2.2	17.1	12.4	
EXTENSIV BKGND 3.	13	57	51	121
	10.7	47.1	42.1	6.7
	8.0	6.2	7.0	
	0.7	3.2	2.8	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.46

Crosstabulation of Background in Disadvantaged Populations, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	66	373	312	751
	8.8	49.7	41.5	41.5
	40.7	40.7	42.8	
	3.7	20.6	17.3	
MODERATE BKGND 2.	64	387	270	721
	8.9	53.7	37.4	39.9
	39.5	42.2	37.0	
	3.5	21.4	14.9	
EXTENSIV BKGND 3.	32	157	147	336
	9.5	46.7	43.8	18.5
	19.8	17.1	20.2	
	1.8	8.7	8.1	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.47

Crosstabulation of Background in Limited English-Speaking Population, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	130	795	580	1505
	8.6	52.8	38.5	83.2
	80.2	86.7	79.6	
	7.2	44.0	32.1	
MODERATE BKGND 2.	27	93	120	240
	11.3	38.8	50.0	13.3
	16.7	10.1	16.5	
	1.5	5.1	6.6	
EXTENSIV BKGND 3.	5	29	29	63
	7.9	46.0	46.0	3.5
	3.1	3.2	4.0	
	0.3	1.6	1.6	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.48

Crosstabulation of Background in Information Services, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	79	428	338	845
	9.3	50.7	40.0	46.7
	48.8	46.7	46.4	
	4.4	23.7	18.7	
MODERATE BKGND 2.	66	363	290	719
	9.2	50.5	40.3	39.8
	40.7	39.6	39.8	
	3.7	20.1	16.0	
EXTENSIV BKGND 3.	17	126	101	244
	7.0	51.6	41.4	13.5
	10.5	13.7	13.9	
	0.9	7.0	5.6	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.49

Crosstabulation of Background in Planning, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	38	189	151	378
	10.1	50.0	39.9	20.9
	23.5	20.6	20.7	
	2.1	10.5	8.4	
MODERATE BKGND 2.	60	410	322	792
	7.6	51.8	40.7	43.8
	37.0	44.7	44.2	
	3.3	22.7	17.8	
EXTENSIV BKGND 3.	64	318	256	638
	10.0	49.8	40.1	35.3
	39.5	34.7	35.1	
	3.5	17.6	14.2	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.50

Crosstabulation of Background in Administration, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	24	128	120	272
	8.8	47.1	44.1	15.0
	14.8	14.0	16.5	
	1.3	7.1	6.6	
MODERATE BKGND 2.	54	339	252	645
	8.4	52.6	39.1	35.7
	33.3	37.0	34.6	
	3.0	18.8	13.9	
EXTENSIV BKGND 3.	84	450	357	891
	9.4	50.5	40.1	49.3
	51.9	49.1	49.0	
	4.6	24.9	19.7	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.51

Crosstabulation of Background in Research and Development, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	61	372	320	753
	8.1	49.4	42.5	41.6
	37.7	40.6	43.9	
	3.4	20.6	17.7	
MODERATE BKGND 2.	74	396	279	749
	9.9	52.9	37.2	41.4
	45.7	43.2	38.3	
	4.1	21.9	15.4	
EXTENSIV BKGND 3.	27	149	130	306
	8.8	48.7	42.5	16.9
	16.7	16.2	17.8	
	1.5	8.2	7.2	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.52

Crosstabulation of Background in Guidance and Counseling, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

COUNT / ROW PCT / COL PCT / TOT PCT	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	73	427	362	862
	8.5	49.5	42.0	47.7
	45.1	46.6	49.7	
	4.0	23.6	20.0	
MODERATE BKGND 2.	52	335	264	651
	8.0	51.5	40.6	36.0
	32.1	36.5	36.2	
	2.9	18.5	14.6	
EXTENSIV BKGND 3.	37	155	103	295
	12.5	52.5	34.9	16.3
	22.8	16.9	14.1	
	2.0	8.6	5.7	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.53

Crosstabulation of Background in Program Evaluation, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	43	208	169	420
	10.2	49.5	40.2	23.2
	26.5	22.7	23.2	
	2.4	11.5	9.3	
MODERATE BKGND 2.	57	387	291	735
	7.8	52.7	39.6	40.7
	35.2	42.2	39.9	
	3.2	21.4	16.1	
EXTENSIV BKGND 3.	62	322	269	653
	9.5	49.3	41.2	36.1
	38.3	35.1	36.9	
	3.4	17.8	14.9	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.54

Crosstabulation of Background in Personnel Training, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	58	317	289	664
	8.7	47.7	43.5	36.7
	35.8	34.6	39.6	
	3.2	17.5	16.0	
MODERATE BKGND 2.	60	364	261	685
	8.8	53.1	38.1	37.9
	37.0	39.7	35.8	
	3.3	20.1	14.4	
EXTENSIV BKGND 3.	44	236	179	459
	9.6	51.4	39.0	25.4
	27.2	25.7	24.6	
	2.4	13.1	9.9	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.55

Crosstabulation of Background in Sex Equity, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	85	535	430	1050
	8.1	51.0	41.0	58.1
	52.5	58.3	59.0	
	4.7	29.6	23.8	
MODERATE BKGND 2.	58	300	228	586
	9.9	51.2	38.9	32.4
	35.8	32.7	31.3	
	3.2	16.6	12.6	
EXTENSIV BKGND 3.	19	82	71	172
	11.0	47.7	41.3	9.5
	11.7	8.9	9.7	
	1.1	4.5	3.9	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table A.56

Crosstabulation of Background in Basic Skills (3Rs) Instructional Techniques, (Self-Reported) Provided by Respondent's Education (Degree Programs, Seminars, Workshops and Other Training Programs) and State Population Size

	SMALL 1.	MEDIUM 2.	LARGE 3.	ROW TOTAL
LIMITED/NO BKGND 1.	73	442	405	920
	7.9	48.0	44.0	50.9
	45.1	48.2	55.6	
	4.0	24.4	22.4	
MODERATE BKGND 2.	30	253	172	475
	10.5	53.3	36.2	26.3
	30.9	27.6	23.6	
	2.8	14.0	9.5	
EXTENSIV BKGND 3.	39	222	152	413
	9.4	53.8	36.8	22.8
	24.1	24.2	20.9	
	2.2	12.3	8.4	
COLUMN TOTAL	162	917	729	1808
	9.0	50.7	40.3	100.0

NUMBER OF MISSING OBSERVATIONS = 11

Table 57

Crosstabulation of Years Employed in a Vocational Education Position in Present State Agency and Ethnic Background

	COUNT / ROW PCT / COL PCT / TOT PCT	AM. IND. OR AK 1.	HISPANIC 2.	AS. AM. OR PAC 3.	WH--NON HISP ORI 4.	BL--NON HISP ORI 5.	ROW TOTAL
0-1 YEARS	1.	3	5	0	177	20	205
		1.5	2.4	0.0	86.3	9.8	11.4
		16.7	22.7	0.0	10.8	18.2	
		0.2	0.3	0.0	9.8	1.1	
2-4 YEARS	2.	5	6	3	334	29	377
		1.3	1.6	0.8	88.6	7.7	20.9
		27.8	27.3	23.1	20.3	26.4	
		0.3	0.3	0.2	18.5	1.6	
5-9 YEARS	3.	5	6	5	419	29	464
		1.1	1.3	1.1	90.3	6.3	25.7
		27.8	27.3	38.5	25.5	26.4	
		0.3	0.3	0.3	23.2	1.6	
10-14 YEARS	4.	5	4	5	421	16	451
		1.1	0.9	1.1	93.3	3.5	25.0
		27.8	18.2	38.5	25.6	14.5	
		0.3	0.2	0.3	23.3	0.9	
15-19 YEARS	5.	0	1	0	183	6	190
		0.0	0.5	0.0	96.3	3.2	10.5
		0.0	4.5	0.0	11.1	5.5	
		0.0	0.1	0.0	10.1	0.3	
20-24 YEARS	6.	0	0	0	59	4	63
		0.0	0.0	0.0	93.7	6.3	3.5
		0.0	0.0	0.0	3.6	3.6	
		0.0	0.0	0.0	3.3	0.2	
25-29 YEARS	7.	0	0	0	18	3	21
		0.0	0.0	0.0	85.7	14.3	1.2
		0.0	0.0	0.0	1.1	2.7	
		0.0	0.0	0.0	1.0	0.2	
30 PLUS YEARS	8.	0	0	0	31	3	34
		0.0	0.0	0.0	91.2	8.8	1.9
		0.0	0.0	0.0	1.9	2.7	
		0.0	0.0	0.0	1.7	0.2	
	COLUMN TOTAL	18	22	13	1642	110	1805
		1.0	1.2	0.7	91.0	6.1	100.0

NUMBER OF MISSING OBSERVATIONS = 14

Table A.58

Crosstabulation of Years Employed in a Vocational Education Position in Present State Agency and Population of Area in Which Respondent Lived During the Ages of 14-17

	COUNT / ROW PCT / COL PCT / TOT PCT	12,499 OR LESS 1.	2,500-10,000 2.	10,001-25,000 3.	25,001-50,000 4.	50,001-100,000 5.	100,001-250,000 6.	250,001 OR MORE 7.	ROW TOTAL
0-1 YEARS	1.	65	30	25	12	24	22	26	204
		31.9	14.7	12.3	5.9	11.8	10.8	12.7	11.3
		10.8	9.7	9.5	8.6	14.9	13.8	15.7	
		3.6	1.7	1.4	0.7	1.3	1.2	1.4	
2-4 YEARS	2.	100	72	53	27	38	47	39	376
		26.6	19.1	14.1	7.2	10.1	12.5	10.4	20.9
		16.6	23.2	20.2	19.3	23.6	29.6	23.5	
		5.5	4.0	2.9	1.5	2.1	2.6	2.2	
5-9 YEARS	3.	149	78	78	45	39	33	43	465
		32.0	16.8	16.8	9.7	8.4	7.1	9.2	25.8
		24.7	25.2	29.8	32.1	24.2	20.8	25.9	
		8.3	4.3	4.3	2.5	2.2	1.8	2.4	
10-14 YEARS	4.	157	79	68	28	40	38	38	448
		35.0	17.6	15.2	6.3	8.9	8.5	8.5	24.9
		26.0	25.5	26.0	20.0	24.8	23.9	22.9	
		8.7	4.4	3.8	1.6	2.2	2.1	2.1	
15-19 YEARS	5.	76	34	22	18	15	15	10	190
		40.0	17.9	11.6	9.5	7.9	7.9	5.3	10.5
		12.6	11.0	8.4	12.9	9.3	9.4	6.0	
		4.2	1.9	1.2	1.0	0.8	0.8	0.6	
20-24 YEARS	6.	29	9	7	6	5	1	7	64
		45.3	14.1	10.9	9.4	7.8	1.6	10.9	3.6
		4.8	2.9	2.7	4.3	3.1	0.6	4.2	
		1.6	0.5	0.4	0.3	0.3	0.1	0.4	
25-29 YEARS	7.	11	5	5	0	0	1	0	22
		50.0	22.7	22.7	0.0	0.0	4.5	0.0	1.2
		1.8	1.6	1.9	0.0	0.0	0.6	0.0	
		0.6	0.3	0.3	0.0	0.0	0.1	0.0	
30 PLUS YEARS	8.	17	3	4	4	0	2	3	33
		51.5	9.1	12.1	12.1	0.0	6.1	9.1	1.8
		2.8	1.0	1.5	2.9	0.0	1.3	1.8	
		0.9	0.2	0.2	0.2	0.0	0.1	0.2	
	COLUMN TOTAL	604	310	262	140	161	159	166	1802
		33.5	17.2	14.5	7.8	8.9	8.8	9.2	100.0

NUMBER OF MISSING OBSERVATIONS = 17

Table 59

Crosstabulation of Years Employed in a Vocational Education Position in Present State Agency and Sex

		FEMALE 1.	MALE 2.	ROW TOTAL
0-1	YEARS 1.	95	107	202
		47.0	53.0	11.2
		18.9	8.2	
		5.3	5.9	
2-4	YEARS 2.	144	232	376
		38.3	61.7	20.9
		28.7	17.8	
		8.0	12.9	
5-9	YEARS 3.	115	350	465
		24.7	75.3	25.8
		22.9	26.9	
		6.4	19.4	
10-14	YEARS 4.	79	370	449
		17.6	82.4	24.9
		15.7	28.5	
		4.4	20.5	
15-19	YEARS 5.	34	156	190
		17.9	82.1	10.5
		6.8	12.0	
		1.9	8.7	
20-24	YEARS 6.	21	43	64
		32.8	67.2	3.6
		4.2	3.3	
		1.2	2.4	
25-29	YEARS 7.	4	18	22
		18.2	81.8	1.2
		0.8	1.4	
		0.2	1.0	
30 PLUS	YEARS 8.	10	24	34
		29.4	70.6	1.9
		2.0	1.8	
		0.6	1.3	
	COLUMN TOTAL	502	1300	1802
		27.9	72.1	100.0

NUMBER OF MISSING OBSERVATIONS = 17

Table A.61

Crosstabulation of Years Employed in a Vocational Education Position in Present State Agency and Age

	COUNT / ROW PCT / COL PCT / TOT PCT	UNDER 31 (1.)	31-35 (2.)	36-40 (3.)	41-45 (4.)	46-50 (5.)	51-55 (6.)	56-60 (7.)	61-65 (8.)	OVER 65 (9.)	ROW TOTAL
0-1 YEARS	1.	34	58	54	22	24	5	6	2	0	205
		16.6	28.3	26.3	10.7	11.7	2.4	2.9	1.0	0.0	11.3
		34.0	21.7	17.4	8.2	7.6	2.2	2.8	2.0	0.0	
		1.9	3.2	3.0	1.2	1.3	0.3	0.3	0.1	0.0	
2-4 YEARS	2.	45	115	82	52	44	23	13	4	0	378
		11.9	30.4	21.7	13.8	11.6	6.1	3.4	1.1	0.0	20.9
		45.0	43.1	26.5	19.3	14.0	10.2	6.0	4.1	0.0	
		2.5	6.4	4.5	2.9	2.4	1.3	0.7	0.2	0.0	
5-9 YEARS	3.	20	83	106	75	82	46	49	5	1	467
		4.3	17.8	22.7	16.1	17.6	9.9	10.5	1.1	0.2	25.8
		20.0	31.1	34.2	27.9	26.1	20.4	22.6	5.1	11.1	
		1.1	4.6	5.9	4.1	4.5	2.5	2.7	0.3	0.1	
10-14 YEARS	4.	1	10	59	92	115	77	64	31	3	452
		0.2	2.2	13.1	20.4	25.4	17.0	14.2	6.9	0.7	25.0
		1.0	3.7	19.0	34.2	36.6	34.1	29.5	31.6	33.3	
		0.1	0.6	3.3	5.1	6.4	4.3	3.5	1.7	0.2	
15-19 YEARS	5.	0	1	9	25	35	46	41	30	3	190
		0.0	0.5	4.7	13.2	18.4	24.2	21.6	15.8	1.6	10.5
		0.0	0.4	2.9	9.3	11.1	20.4	18.9	30.6	33.3	
		0.0	0.1	0.5	1.4	1.9	2.5	2.3	1.7	0.2	
20-24 YEARS	6.	0	0	0	3	11	18	22	8	1	63
		0.0	0.0	0.0	4.8	17.5	28.6	34.9	12.7	1.6	3.5
		0.0	0.0	0.0	1.1	3.5	8.0	10.1	8.2	11.1	
		0.0	0.0	0.0	0.2	0.6	1.0	1.2	0.4	0.1	
25-29 YEARS	7.	0	0	0	0	2	4	11	4	0	21
		0.0	0.0	0.0	0.0	9.5	19.0	52.4	19.0	0.0	1.2
		0.0	0.0	0.0	0.0	0.6	1.8	5.1	4.1	0.0	
		0.0	0.0	0.0	0.0	0.1	0.2	0.6	0.2	0.0	
30 PLUS YEARS	8.	0	0	0	0	1	7	11	14	1	34
		0.0	0.0	0.0	0.0	2.9	20.6	32.4	41.2	2.9	1.9
		0.0	0.0	0.0	0.0	0.3	3.1	5.1	14.3	11.1	
		0.0	0.0	0.0	0.0	0.1	0.4	0.6	0.8	0.1	
	COLUMN TOTAL	100	267	310	269	314	226	217	98	9	1810
		5.5	14.8	17.1	14.9	17.3	12.5	12.0	5.4	0.5	100.0

NUMBER OF MISSING OBSERVATIONS = 9

Table 60

Crosstabulation of Ethnic Background and Sex

COUNT / ROW PCT / COL PCT / TOT PCT	FEMALE 1.1	MALE 2.1	ROW TOTAL
1. AM. IND.OR AK	2	16	18
	11.1	88.9	1.0
	0.4	1.2	
	0.1	0.9	
2. HISPANIC	7	14	21
	33.3	66.7	1.2
	1.4	1.1	
	0.4	0.8	
3. AS. AM. OR PAC 1	3	10	13
	23.1	76.9	0.7
	0.6	0.8	
	0.2	0.6	
4. WH--NON HISP ORI	444	1197	1641
	27.1	72.9	91.1
	88.1	92.2	
	24.6	66.4	
5. BL--NON HISP ORI	48	61	109
	44.0	56.0	6.0
	9.5	4.7	
	2.7	3.4	
COLUMN TOTAL	504	1298	1802
	28.0	72.0	100.0

NUMBER OF MISSING OBSERVATIONS = 17

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APPENDIX B

SURVEY INSTRUMENT USED TO COLLECT DEMOGRAPHIC AND PROFESSIONAL PROFILE DATA

Form Approved
FEDAC No. S194
App. Exp.: 1/31/81
Approval Date: 10/3/80

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 KENNY ROAD · COLUMBUS, OHIO 43210

STATE AGENCY SURVEY

A STATE-LEVEL STUDY OF ADMINISTRATORS OF VOCATIONAL EDUCATION

INSTRUCTIONS: You are invited to participate in a voluntary survey being conducted by the National Center for Research in Vocational Education. Although the survey is on a voluntary basis, your participation is needed to make the results comprehensive and accurate. The purpose of the survey is to collect information from each state concerning the staffing of vocational education at the state level. The outcome will be an information base which should prove useful for federal and state leaders involved in vocational education planning and policy setting.

When you have completed the instrument, please seal it in the envelope and return it according to the directions provided by your state contact person. The results will be treated anonymously so do not place your name on the survey.

We appreciate your assistance and time.

Conducted by:
The National Center for Research in Vocational Education
The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Department of Education

STATE AGENCY SURVEY

INSTITUTIONAL INFORMATION

Please indicate the position classification which best corresponds to your present position; check only one response. Refer to the **Glossary of Terms** included at the last page of the survey for the exact definition of each position classification.

1. My position classification is:

(1) ☐ State Director
(2) ☐ Deputy Director or Assistant Director
(3) ☐ Supervisor of a Program Area
(4) ☐ Coordinator
(5) ☐ Program Specialist
(6) ☐ Functional Specialist

3. My State is: _____

4. My full time equivalent in vocational education is:

(1) ☐ 1.0
(2) ☐ .75 - .99
(3) ☐ .50 - .74

Please indicate the area of responsibility for the position which you presently hold; check only one response. For the definition of the term Administration, please see the **Glossary of Terms** included as the last page of the survey.

2. The area of responsibility which best describes my present position is:

(1) ☐ Administration
(2) ☐ Adult Education
(3) ☐ Agricultural Education
(4) ☐ Business and Office Education
(5) ☐ CETA
(6) ☐ Consumer and Home Economics Education
(7) ☐ Curriculum
(8) ☐ Disadvantaged
(9) ☐ Distributive Education
(10) ☐ Evaluation
(11) ☐ Guidance
(12) ☐ Handicapped
(13) ☐ Health Occup. Education
(14) ☐ Industrial Arts Education
(15) ☐ Personnel Development
(16) ☐ Planning
(17) ☐ Postsecondary Education
(18) ☐ Research
(19) ☐ Sex Equity
(20) ☐ Technical Education
(21) ☐ Trade and Industrial Education
(22) ☐ Management Information
(23) ☐ Civil Rights
(24) ☐ Other (please specify)

_____
_____
_____

5. How many years have you been employed in a vocational education position in your present state agency?

(1) ☐ 0 - 1 year
(2) ☐ 2 - 4 years
(3) ☐ 5 - 9 years
(4) ☐ 10 - 14 years
(5) ☐ 15 - 19 years
(6) ☐ 20 - 24 years
(7) ☐ 25 - 29 years
(8) ☐ 30 or more years

6. How many years have you worked in your present position?

(1) ☐ 0 - 1 year
(2) ☐ 2 - 4 years
(3) ☐ 5 - 9 years
(4) ☐ 10 - 14 years
(5) ☐ 15 - 19 years
(6) ☐ 20 - 24 years
(7) ☐ 25 - 29 years
(8) ☐ 30 or more years

B. PERSONAL BACKGROUND

7. During the ages 14-17, which of the following describes the population of the area in which you lived? If you moved during those years, check the response where you lived the greatest period of time.

(1) ☐ Less than 2,500
(2) ☐ 2,500 - 10,000
(3) ☐ 10,001 - 25,000
(4) ☐ 25,001 - 50,000
(5) ☐ 50,001 - 100,000
(6) ☐ 100,001 - 250,000
(7) ☐ 250,001 or more

8. Ethnic Background:

(1) ☐ American Indian or Alaskan Native
(2) ☐ Hispanic
(3) ☐ Asian American or Pacific Islander
(4) ☐ White, not of Hispanic Origin
(5) ☐ Black, not of Hispanic Origin

9. Sex: (1) ☐ Female (2) ☐ Male

10. Age: Are you currently –

(1) ☐ Under 31
(2) ☐ 31 - 35
(3) ☐ 36 - 40
(4) ☐ 41 - 45
(5) ☐ 46 - 50
(6) ☐ 51 - 55
(7) ☐ 56 - 60
(8) ☐ 61 - 65
(9) ☐ Over 65

C. PROFESSIONAL PREPARATION AND EXPERIENCE

11. Presently what is the highest degree you hold?

(1) ☐ High School (2) ☐ Associate Arts (3) ☐ Bachelor's

(4) ☐ Master's (5) ☐ Education Specialist (6) ☐ Doctorate

12. In the table below, please state your **major area of study** for each degree you have earned (e.g., Distributive Education, Industrial Arts, School Administration, Industrial Psychology, etc.). If no degree is held, please write No Degree.

DEGREE	MAJOR AREA OF STUDY
Associate Arts	
Bachelor's	
Master's	
Education Specialist	
Doctorate	

13. Prior to your present position, please indicate where appropriate, the number of years you served in each of the positions listed below. If you had a joint appointment, select the one position for which you had the *most* responsibility. Give your response in years only; round off months of employment to the nearest year.

POSITION	NO. OF YEARS IN POSITION
General Education Secondary Teacher	____
Vocational Education Secondary Teacher	____
Vocational Education Postsecondary Instructor	____
General Education Postsecondary Instructor	____
College Professor	____
State Education Agency Administrator	____
Elementary/Secondary School Administrator	____
Secondary School Administrator in Vocational Education	____
Administrator in 2-year Postsecondary Institution	____
Administrator in 4-year College/University	____
Employee in Business/Industry	____
Employee in a Federal Agency	____
Other (please specify) _____	____
TOTAL NO. OF YEARS =	____

14. Please list the position you held immediately before assuming your vocational responsibility in the state education agency: include the educational level (e.g., secondary school, community college, etc.), the number of years, and the state in which you held that position.

Prior Position	Educational Level
No. of Years	**State**

Using the position classifications used in Question 1 and the areas of responsibility in Question 2, list all positions you have held in vocational education in the state education agency. (Begin with present position.)

Position Classification	Area of Responsibility

15. Place a checkmark beside each of the following specialty areas in which you have had major work experience. Consider both your current position and your previous positions. Also indicate the number of years experience (round off months to the nearest year).

Specialty Area	Major Responsibility	No. of Years In Position
Economic Development	☐	_____
Disadvantaged Populations	☐	_____
Limited English-Speaking Populations	☐	_____
Handicapped Populations	☐	_____
Information Systems	☐	_____
Planning	☐	_____
Administration	☐	_____
Research and Development	☐	_____
Guidance and Counseling	☐	_____
Program Evaluation	☐	_____
Personnel Training	☐	_____
Sex Equity	☐	_____
Basic Skills (3 Rs) Instructional Techniques	☐	_____

16. Please rate the degree to which your education (degree programs as well as seminars, workshops, and other training programs) has provided a background in each of the following specialty areas. Use the following rating scale:

3 – Extensive Background
2 – Moderate Background
1 – Limited or No Background

Specialty Areas	Extent of Background
Economic Development	_____
Disadvantaged Populations	_____
Limited English-Speaking Populations	_____
Information Systems	_____
Planning	_____
Administration	_____
Research and Development	_____
Guidance and Counseling	_____
Program Evaluation	_____
Personnel Training	_____
Sex Equity	_____
Basic Skills (3 Rs) Instructional Techniques	_____

THANK YOU.

GLOSSARY OF TERMS

STATE AGENCY

An organizational unit responsible for vocational education at the state level. Example would include the **State Division, Bureau, Department of Vocational Education,** or **State Board of Vocational Education.** Some states have more than one state agency having responsibility for vocational education.

ADMINISTRATION

The performance of executive duties which facilitate the Division's goals.

Position Classification

STATE DIRECTOR

The chief administrator of Vocational Education.

DEPUTY OR ASSISTANT DIRECTOR

A senior-level administrator who occupies the hierarchical position, one or two levels below the State Director.

SUPERVISOR OF A PROGRAM AREA
(program area = Agriculture, Home Economics, Business and Office Education, etc.)

The administrative head of a traditional vocational education program service area. In some states, the term **chief** or **head** is used instead of supervisor.

COORDINATOR

The administrative head of a support service area of vocational education (e.g., evaluation manager, research coordination unit director, sex equity coordinator, etc.).

PROGRAM SPECIALIST

An individual who works in one of the traditional vocational education program service areas. In some states, the term **program area consultant** is used instead of program specialist.

FUNCTIONAL SPECIALIST

An individual who works in one of the support service areas (e.g., evaluation, curriculum, planning, etc.) or an individual who holds a special type of position which does not fit into the other stated classifications.

APPENDIX C

HISTORICAL RECORD OF TURNOVER AMONG STATE DIRECTORS OF VOCATIONAL EDUCATION AND CHIEF STATE SCHOOL OFFICERS

Table C.1

Turnover of State Directors of Vocational Education and Chief State School Officers

Year	Number of Turnovers	
	Vocational Education State Directors	Chief State School Officers
1962	4	7
1963	1	9
1964	11	7
1965	11	4
1966	12	7
1967	7	11
1968	12	7
1969	5	8
1970	6	6
1971	10	13
1972	11	5
1973	4	5
1974	7	5
1975	11	12
1976	14	5
1977	8	7
1978	9	4
1979	10	10
Total	153	132

APPENDIX D

FULL TIME STAFF EQUIVALENT COUNT FOR SURVEY STATES BY STATES AND BY AREAS OF RESPONSIBILITY

TABLE D.1

FULL TIME STAFF EQUIVALENT
COUNT FOR SURVEY STATES
BY STATES AND BY AREAS
OF RESPONSIBILITY

AREA OF RESPONSIBILITY / STATE	Alabama	Alaska	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Florida	Georgia	Hawaii	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
Administration	3	1	2	5	10	3	10	1	8	9	1	2	11	2	8	2	6	2	1	7	5	3	7	9	2
Adult Ed	1	1					3	1							2	.25			7				6	1	1
Agricultural Ed	11	1.25	1	4	9	2	2	1	7	8		2	1		4	2	5	3	1	1		1	3	7	6
Business/Office Ed	6	.25	1	3	7	4	2	1	7	3		2			2	.50	5	3	.50	1		2	2	2	4
CETA	1	1			8	5	5	.50	1	7		2	14	6	3	1	3		2	4	4	5	3	9	5
Consumer/Home Ed	5	.25	2	6	7	3	1	1	7	6		2	1		2	1	6	3	1	1		3	3	5	6
Curriculum	4	.25				1		.25		5		.25	1			.50		.50		1		1		1	
Disadvantaged	2	.25	2	1	1	1	2		2	1		.66			1.50	1	1	1	.50	1	1	3	1	1	2
Distributive Ed	5	.25	1	1		2	2	.50	7	2		1			1	.75	3	2	.50	1		1	2	2	3
Evaluation		.50	1	1	1		2	.25	3	1	.50	.38	2	1		.25		.50	.33	1	1	1	4	1	
Guidance	2	.25	1			1	1			1	1	1	2		1.25	1				1	4	1		1	8
Handicapped		.25	1	1	.50	1	1		1	1		.33		2	1.50	.50		1		1	1	1	1	1	
Health Occ Ed		.25	1	1	1	2	2	1	7	2		1	2		3	.75	3	1	.50	1		1	3	1	1
Industrial Arts	1	.25	1		.50		1	1	1	2		2	1		1		1	2	.50	1		.50	2	2	1
Personnel Devel.		.25	1		1	1	1	1	1	1	.50	.50	2	1	1		3			1	2	1		1	
Planning		.50		1	1	6	1	.50	7	1	.50	.50	2	1	1	1	1		.33	1	1	5	1	1	1
Post Secondary			1	1			3			2						3		9	1	1	2	3	10		
Research	5	.25	1	1	2	1	2	1	4	1		.25	3	1	2		2	3		1			1	1	3
Sex Equity	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1		1	1	1	2	1	1	1	1
Technical Ed		.25	1			3				1		.50				.25					3		1	1	2
Trade and Industry	13	.25	1	2	8	4	2	1	7	3		1.50			2	1	5			1		2.50	3	5	2
Management Inf.	1	3				1	1		3	3	.50	1	1	1	1	1	8		.33	1	7	6	3	2	
Civil Rights		.5	1	1		1	1		1	1	.50	.13	3	1		.25	7			1	1	2		1	
Other		2	1	5	7	4			19	6	1.50	2.50	12	4	6			3	8	11	46	7	15	10	2
Total	61	15	22	35	65	47	46	14	94	68	7	24	60	21	44.25	19	59	35	25	41	80	51	72	66	50

AREA OF RESPONSIBILITY / STATE	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Texas	Utah	Vermont	Virginia	West Virginia	Wisconsin	Wyoming	Total
Administration	1.80	2	.69	4	10	2	6	5	3	3	6	1	7	10	11	2	2	4	2	3	5	32	1	243.50
Adult Ed			1		2		17			1	7		2	1			12				6	2	.33	74.60
Agricultural Ed	1	4	.60	1	2	2	3	5	2	13	8	1	7		5	1	15	1	1	7	2	5	1	169.90
Business/Office Ed	1	2	.30	1	3	1	3	4	1	7	2		8		5	1	7	1	.50	5	2	3	1	117
CETA	2	1	.50	1	6	3	8	1	2	7	7		9	1	1	1	2	3	1		5	3		154
Consumer/Home Ec	1	2	.50	1	3	2	3	5	2	15	7	1	7		5	1	12	2		7	2	4	1	156.30
Curriculum	1	.50			1		8	1	.33	2.50	11					1	.50	1			2	1		46.60
Disadvantaged	.40	1.50	.25	1	3	1		1	.50	2	3		2		1	.25	2		.33	2	1	3	.33	52.50
Distributive Ed	.80	1	.50	1	2	1	3	4	1	11	2	1	3		3	1	8	1	.50	5	1	2.50	1	92.10
Evaluation	.40	.50	.40		1		4	1		1	3	1	1	2			1		.50		.50	3	.50	43.50
Guidance	1	.50		1	2			1	1	4	12		1		1		2	1			.50	1.50	.50	57
Handicapped	.40	.50	.25	1	2		1		.50	1			2			.25	1	.25	.33		1	1	.33	29.90
Health Occup Ed	.20	1		1	2		3	2		6	2		5		1	.50	2	.75	.33	1	1	2	.75	67
Industrial Arts	.20	1	.20	1	2	2	5	2	1	3	1	1			1		2	1		4	.50	1	.25	50.90
Personnel Development	.20	.50			1			1	.33	.50			1		1		.50			1	.50	1		28.80
Planning	.50	.50	.60	1	3	1	7	1		.50	2	1	3	1			1			2	1	2.50	.50	64.40
Post Secondary	.60			3	1	1	6	5		1			1				8			1			.33	64
Research	.20			2	1		7		.33	.50	2	1	4	1	3		2		.25	3	2	1.50		66.30
Sex Equity	1	1.50	1	1	2	1	2	1	1	1	1		6	1	1		1	1	1	1	1	2	1	55.50
Technical Ed	.20		.20		1					1											1			16.20
Trade and Industry	.60	2	.20	1	3	3	5	10	2	15	5	6	7		6	1	15	1	1	5	2	6	.50	161.80
Management Inf	1.20	.50	.70		1	1			.50	2	1	1	1				1		.33		3.50	4		61.60
Civil Rights		.50	.10				11			1	1		6				1	1	.33	1	.50	2	.33	49.10
Other	.30	30		2	13		2.50		1.50	4	28	2			7	2	6		1	2	3	11	.33	310.10
Total	16	53	8	24	67	21	127	50	20	103	111	17	83	17	52	12	104	19	10.3	50	44	94	11	2234.60

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